




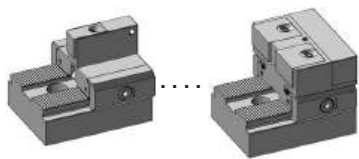
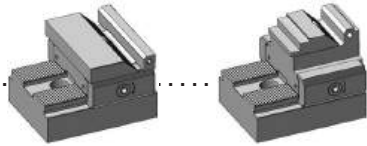
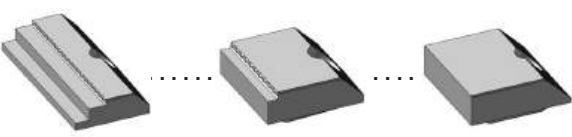
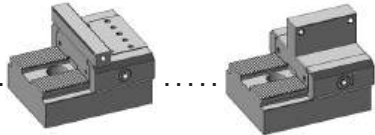

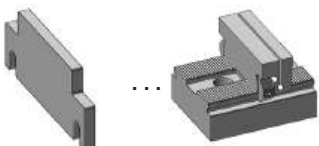




*power*CLAMP & *5axes*



	Einleitung <i>Introduction</i>	15 - 21
	Bedienungsanleitung <i>Operating manual</i> Spannkraft und Drehmoment <i>Workholding force and torque</i>	22
	Anwendungsbeispiele <i>Examples of application</i>	23 - 38
	System - Basisschiene <i>System - base-rail</i>	 41 - 57
	Modular - Startersets <i>Modular - Starter kit</i>	 58 - 59
	Niederzugspannmodule <i>Pull down clamp modules</i>	 60 - 73
	Linearspannmodule mit Präge- und Linearbacken <i>Linear clamping modules with stamping and linear jaws</i>	 74 - 83
	Backen zu Linear <i>Jaws for linear</i>	 82 - 84
	Anschlagmodule <i>End module</i>	 85 - 92
	Verschiedene Module <i>Different modules</i>	 93 - 105
	Zubehör <i>Accessories</i>	 106 - 112

Warum modular Spannen Why modular workholding

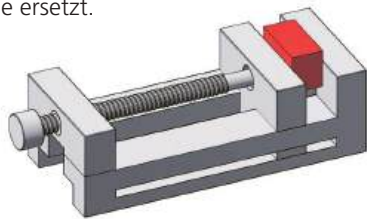
powerCLAMP

Der klassische Maschinenschraubstock ist für gewisse Zerspanungsarbeiten vielfach die richtige Wahl, obwohl man einen Spannstock ohne Mehrkosten auch mit einem Modularesystem aufbauen kann. Er wird durch die ständig erhöhten Anforderungen an die Prozessoptimierung immer mehr durch modulare Spannsysteme ersetzt.

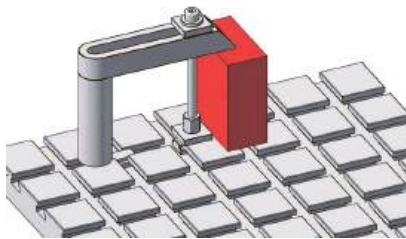
The classic machine vise is for some application still a good option, on the other hand can you set up the same with a modular clamp system at not higher costs! Because of always increasing demand and high competition you see more modular systems at endusers places, to keep up with productivity.

Mit den modularen Systemen wird ein hohes Mass an Flexibilität und grosser Spanndichte erreicht. Dies führt auch bei der Einzelteil- und Kleinserienfertigung zur Senkung der kostenintensiven Nebenzeiten, die einen wichtigen Faktor in der Wertschöpfungskette darstellen. Gegenüber Vorrichtungen ist der Vorteil, dass bei einem modularisiertem Aufbau die Aufspannung aus einem Baukastensystem (also standardisierten Einzelbauteilen) besteht, die kostengünstiger sind und für andere Aufspannungen wiederverwendet werden können. Zudem wird für die 3-Seitenbearbeitung eine gute Zugänglichkeit zum Werkstück gewährleistet.

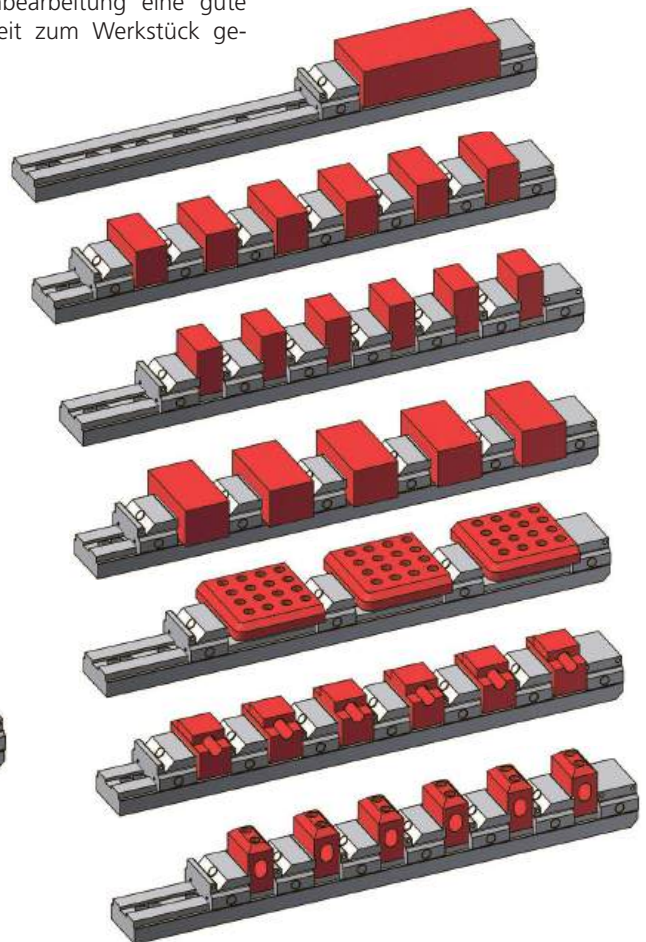
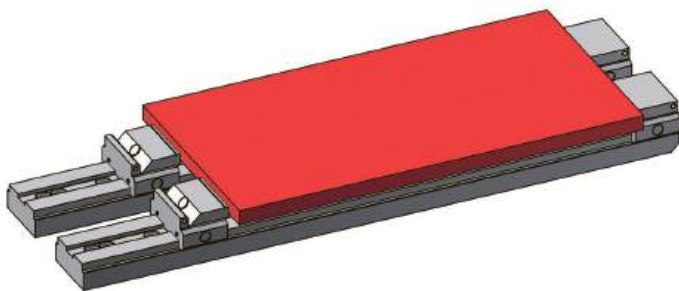
With modular clamp system you achieve a high flexibility and also high density of holding workpieces. This brings you big advantages also by producing single parts or small quantities! Compared to dedicated fixtures you can use this vises for many different applications.



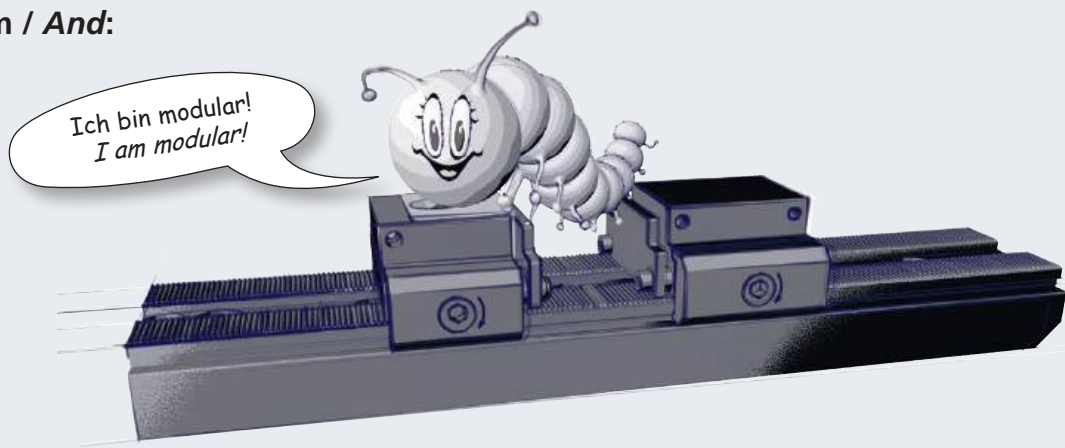
Spannen mit dem Spannstock
Clamping with the machine vise

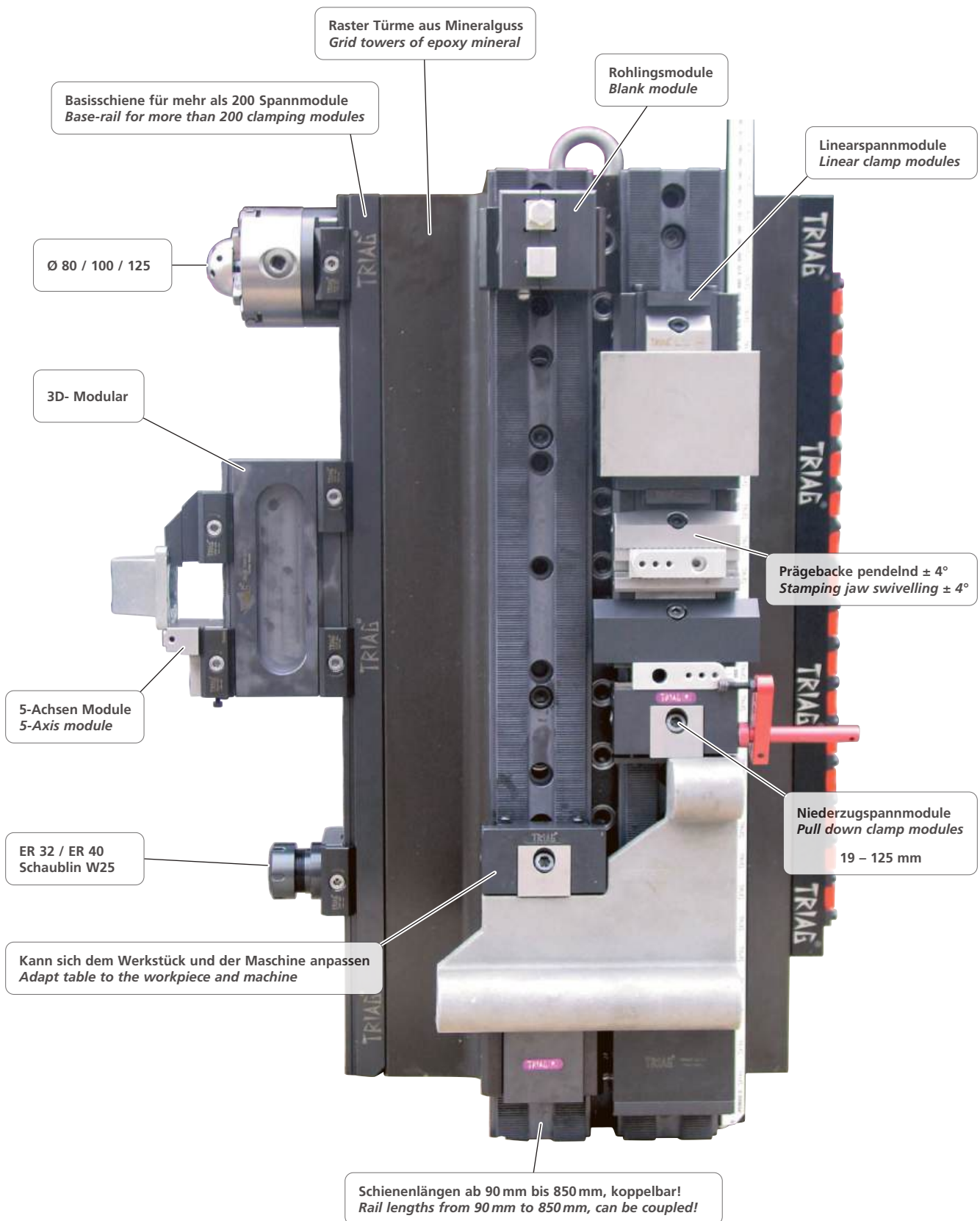


Spannen mit Spannpratzen
Clamps in operation



Ausserdem / And:





Modulares Spannen = Einzelspannung, Mehrfachspannung sowie auch das Spannen von kleinen, grossen oder unförmigen Werkstücken.
Chaotisches, gemischtes spannen!

Modular workholding = Single clamping, multiple clamping small parts and large workpieces can be clamped, also shaped parts are possible to clamp.
Mixed setups in chaotical clamp situation!

Mit dem Spannsystem Power Clamp hat die Triag International ein Produkt entwickelt, welches die Vorteile des klassischen Maschinenschraubstocks mit der Modularität eines innovativen Spannsystems in einer optimalen Art und Weise kombiniert und eine enorme Vielseitigkeit bietet. Einfache Spannungen sind genauso möglich wie Mehrfachspannungen und Spannungen von schwierigen Werkstücken.

With Power Clamp Triag has developed a product which includes the advantages of a classical vise and has the features of an advanced modular system. It can be used to clamp single parts (small and big) or multiple workholding as well as difficult to clamp parts.

Schnelligkeit / Quickness



1

Eine Schraube lösen
Loosen a screw



2

Abheben und neu platzieren
lift and change position



3

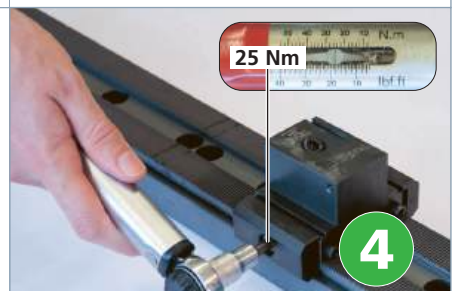
Eine Schraube anziehen
fasten one screw

Mit nur einer Schraubspindel, welche von beiden Seiten her zugänglich ist, werden die positionierten Module in einem patentierten Pratzensystem zuverlässig geklemmt.

Die Module können an jeder Stelle der Trägerschienen aufgesetzt werden. Verglichen mit dem üblichen axialen Aufschieben beschleunigt das den Aufbau von Mehrfachspannern und ermöglicht, diese Spannsysteme auch bei beengten Platzverhältnissen komfortabel zu rüsten.

With only one bolt screw (left and right hand thread) the clamp modules can be lifted and change position in 2mm steps.

This patented system is unique and fast, as well as accurate.



4

Drehmoment beachten
Observe the torque

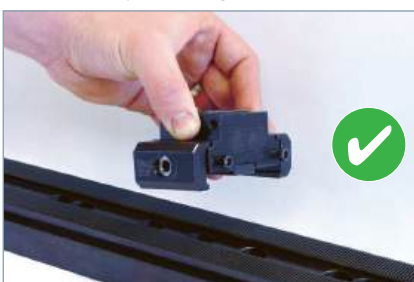
Gerignes Gewicht Low weight



= Einfaches Handling
= Easy handling

Das Modul kann mit zwei Fingern abgehoben werden.

The clamp module can be moved by two fingers.



Einfache Reinigung Easy cleaning



Keine spänefüllenden T-Nuten (im Gegensatz zu vielen Wettbewerbsprodukten) - Basis bilden stabile, mit Teilstücken verlängerbare Trägerschienen. Sie verfügen über eine hochgenau gefräste Verzahnung.

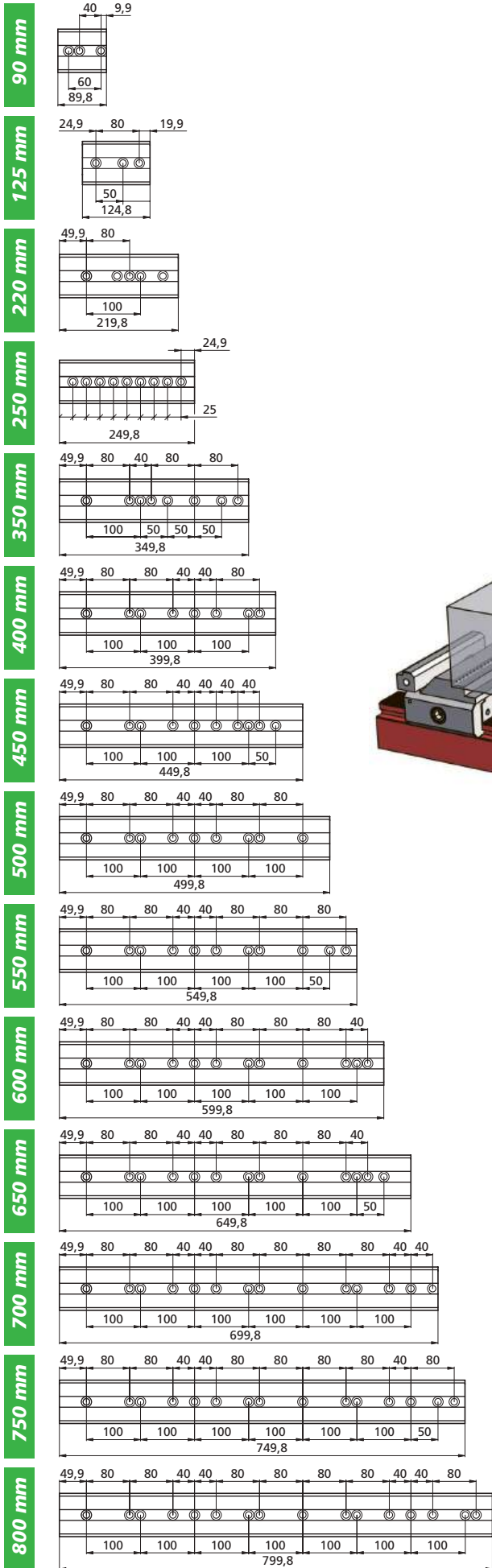
Eine Vielzahl an Spannmodulen mit unterschiedlichen Spannelementen lassen sich auf den Trägerschienen in einem Raster von 2 mm positionieren.

No chip catching T-slots (opposite of many competitors). The base rails are rigid and can be used modular in length width and height. The serration is accurate and checked for each base rail.

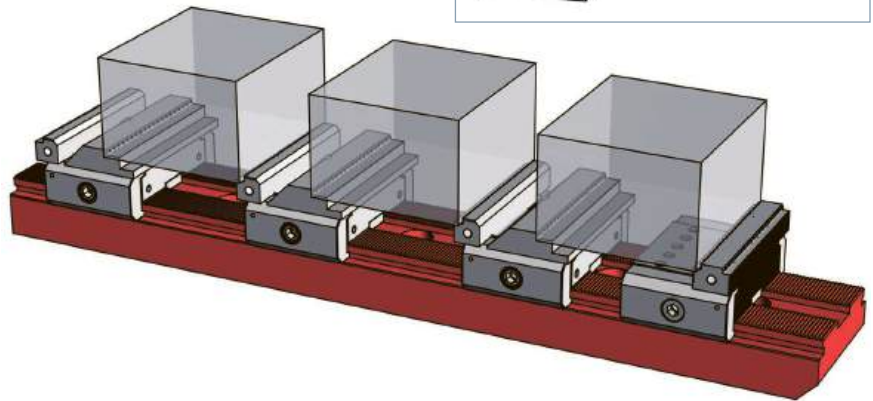
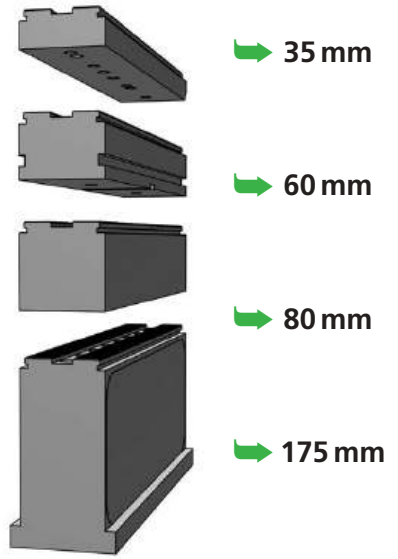
Many different clamp modules can be used on only one type base rail (step 2 mm)

Basisschienen / Base rails

Masssystem / Measurement system = metric & inch **powerCLAMP**



Schienen sind in den folgenden Höhen lieferbar:
 Rails are in following ups available:



Basisschiene

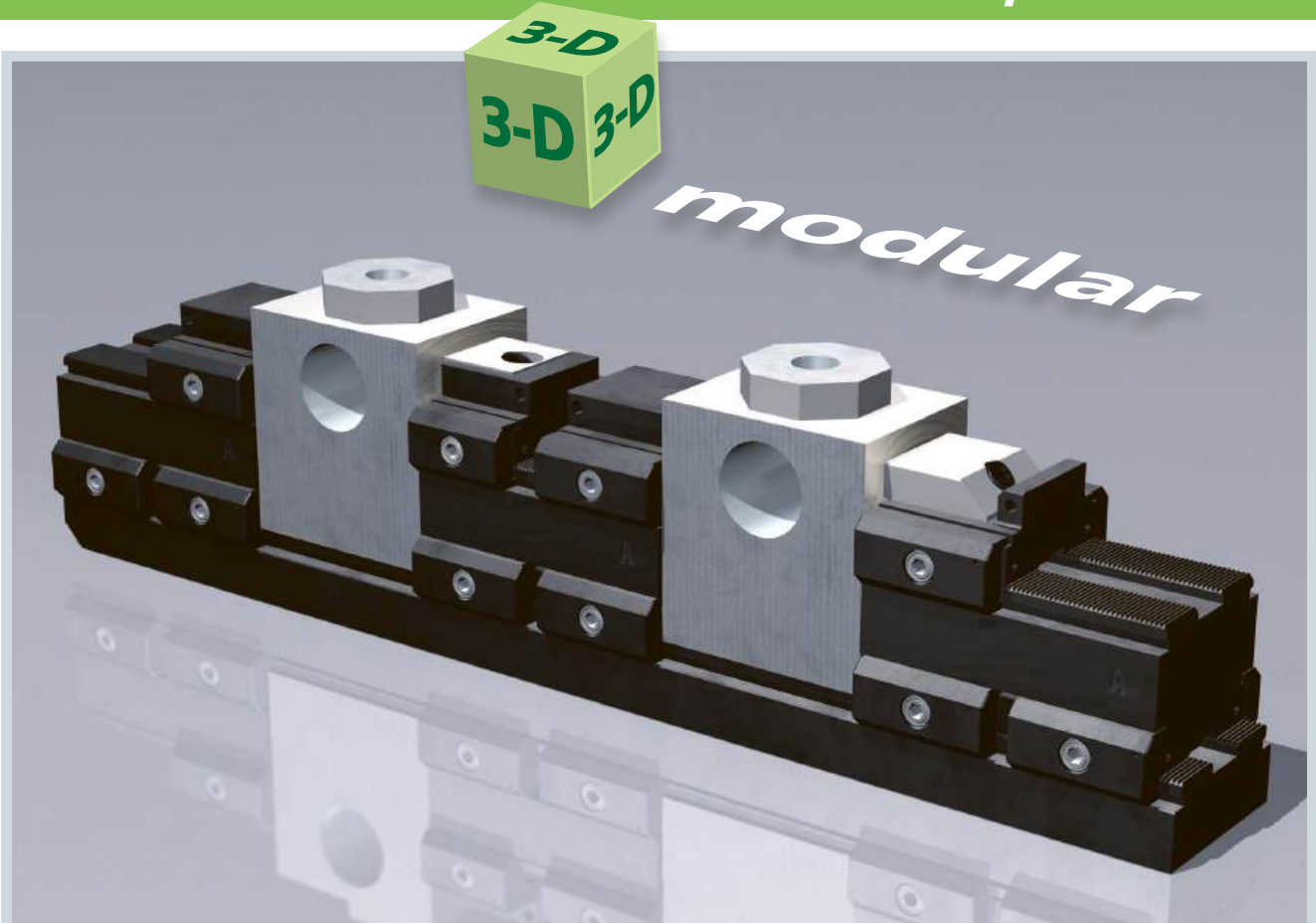
Die Basisschiene ist das Grundelement des modularen Spannsystems von Triag International und ist in den Höhen 35 mm, 60 mm, 80 mm und 175 mm verfügbar. Auf der Basisschiene werden alle Spann- und Anschlagmodule über eine Schraubspindel mit einer Haltekraft von 15.000 daN (= 15 t) befestigt. Eine schnelle und genaue Positionierung ist durch die Verzahnung (2 mm Teilung) auf der Basisschiene gewährleistet und sorgt somit für kurze Rüstzeiten.

Durch den Einsatz von Erhöhungsmodulen wird die Werkstück-Zugänglichkeit speziell bei 5-Achsenmaschinen auch mit kurzen Werkzeugaufnahmen ermöglicht. Somit ist die Maximalgröße der Werkstücke nur noch durch die Maschinengröße eingeschränkt. Die Basisschiene dient in diesem Zusammenhang als mechanisches Nullpunktsystem.

Die Basisschienen sind für eine schnelle Aufspannung auf den gängigsten Palettsystemen konzipiert. Aus Gewichtsgründen können auch die eigens entwickelten Spanntürme aus Mineralguss eingesetzt werden. Diese verfügen über eine so hohe Vibrationsdämpfung, dass dadurch im oberen Bereich der Türme sehr präzise gearbeitet und dabei eine exzellente Oberflächengüte erreicht werden kann.

Basisschienen / Base rails

Masssystem / Measurement system = metric & inch powerCLAMP



Mit verschiedenen Basismodulen kann man auch die 3. Dimension Modular gestalten! Mit der Höhe von 60 mm kann die Modulhöhe auf 94 respektive auf 109 mm erhöht werden (34/49 Modulhöhe). Die Länge von 130 mm erlaubt es jeweils ein Spannmodul und ein Anschlagmodul zu platzieren.

There are different sizes of riser blocks to increase the height of the clamp modules. This way you can get from 34 to a clamp height of 94 or 109 mm depending on the clamp module you choose. This riser blocks makes the power clamp system 3D-modular!

Mehr auf Seite | More on Page 48

Base rail

The base rail is the basic element of the Triag modular clamp system. We offer them in different lengths and heights and more than a hundred different standard clamp modules will fit onto the base rails.

Holding force which the clamp modules are clamped to the base rail is 15'000 daN (15t). The precision serration in 2mm pitch allows to fit the clamps fast and accurate.

All three dimension are modular! You can double or triple the length with coupling the rails or you can use them side words in a row. Also the height is modular (please see next page)



Basisschienen in Zoll
Base rails in inch



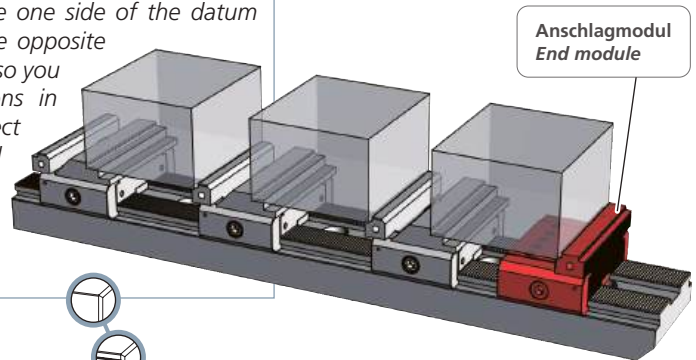
Das Anschlagmodul / End modules

Für das Spannsystem «Power Clamp» ist in der Regel nur ein Anschlagmodul als «feste Backe» notwendig. Mittels der 2 mm Verzahnung lässt sich das Modul sehr genau auf der Basisschiene positionieren und ist mit der Schraubspindel schnell befestigt.

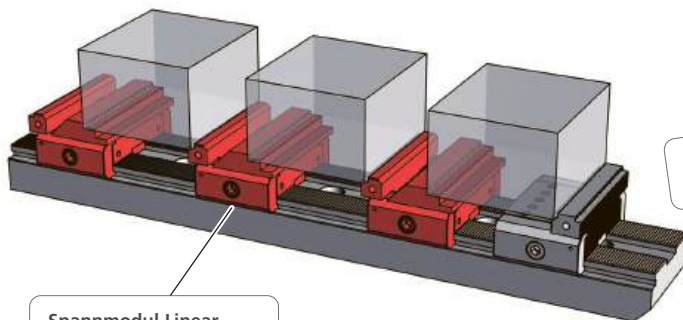
Für die unterschiedlichen Bearbeitungssituationen steht eine Vielzahl von Ausführungen zur Verfügung. Diese unterscheiden sich in der Breite der Backen (ab 19 mm bis max. 150 mm) als auch in der Beschaffenheit der Spannflächen (glatt, geriffelt, gerillt, hartmetallbeschichtet oder mit Prägeverzahnung, mit der direkt geprägt werden kann).

In a row of parts there is usually one end module followed by the clamp modules. For all the different clamp situation we offer a wide range of different end modules from 19 mm to 150 mm.

Usually you have one side of the datum face flat and the opposite double serrated so you have two options in one. Also direct stamping end modules with a workholding step of 3 mm are available.



Anschlagmodul
End module



Spannmodul Linear
Linear clamping module

Verschiedene Ausführungen der Anschlagflächen!
Different styles at grip surfaces!



Lineare Direktprägespannung
Linear direct stamping module

Das Spannmodul / Clamp modules

Die «beweglichen Backen» gibt es in zwei Ausführungen. Zum einen für das Niederzugspannsystem und zum anderen für das Linearspannsystem. Dabei dient das Spannmodul bei beiden Systemen wiederum als Anschlagmodul für die nächste Aufspannung.

Die Breite der Spannfläche bewegt sich wie bei den Anschlagmodulen im Bereich zwischen 19 mm und 125 mm. Durch die innovativen Ausführungen der Spannflächen wie z. B. die Prägebacken oder Druckstifte werden enorme Haltekräfte erreicht.

Bei umfangreichen Testreihen zu der Werkstückverschiebung bei einer Spannkraft von 2000 daN und einer Zerspankraft von bis zu 600 daN wurden bei der Verwendung von Prägebacken nur minimale Abweichungen vom Nullpunkt festgestellt. Leichte Abweichungen von der Parallelität der Werkstücke werden mit der Pendelfunktion ($\pm 4^\circ$) ausgeglichen.

Innovative Lösungen gibt es auch für spezielle Spannaufgaben, wie z.B. Formbacken, Dreibacken- und Spannzangenfutter, Vakuumplatten oder Magnetspannplatten.

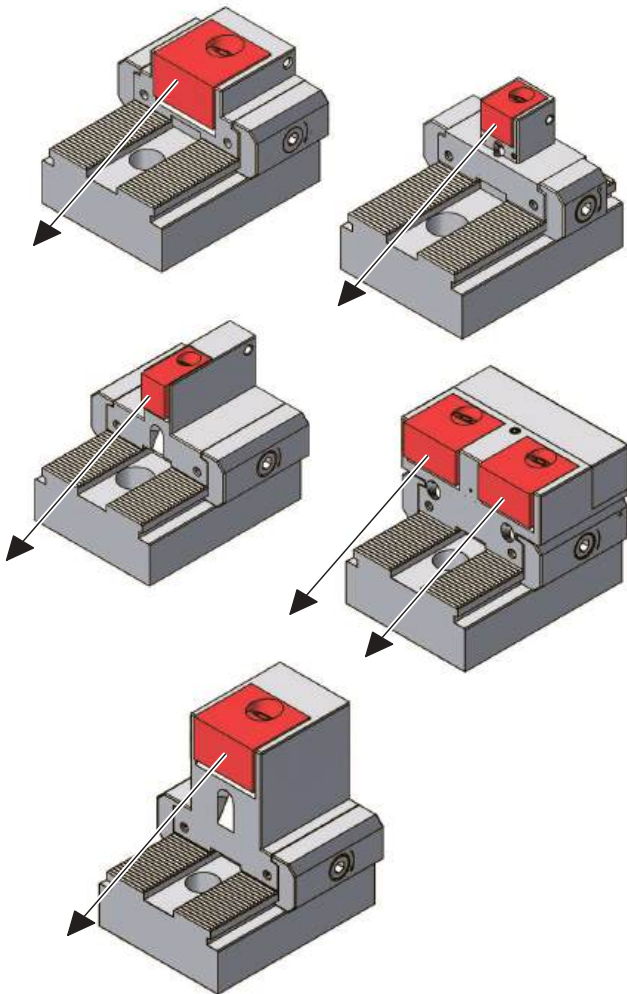
There are mainly two different types of clamp modules. Linear and pull down jaws both with integrated datum face for the next workpiece. Datum face can normally be double serrated or flat.

The movable jaws you can get in various versions such as hardened flat, carbide coated soft jaws double serrated, linear pull down, direct stamping dovating and more. The width of the clamps modules starts from 19 mm up to 125 mm.

Clamping force goes to a maximum of 2800 daN (2,8t).

For special clamping situations we offer also chucks, collet chucks vacuum plates or even magnet plates which fits onto the Power Clamp base rails.

**Niederzugspanmodule
Pull down clamp modules**



Die Fakten beim Niederzugspannsystem

Verstellbereich: 0- 4,1 mm
Spannkraft: Bis 2'800 daN

Vorteile beim Niederzugspannsystem:

- Höhere Haltekräfte
- Hohe Wiederholgenauigkeit
- Optimale Spannmethode für Kleinteile
- Mit Schnellwechselbacken
- Doppelspannsystem in einer Backe zum Spannen und Bearbeiten von zwei Kleinteilen
- Mit Vorsatz als Linearspannsystem einsetzbar
- Auch Anschläge mit Niederzugeffekt erhältlich

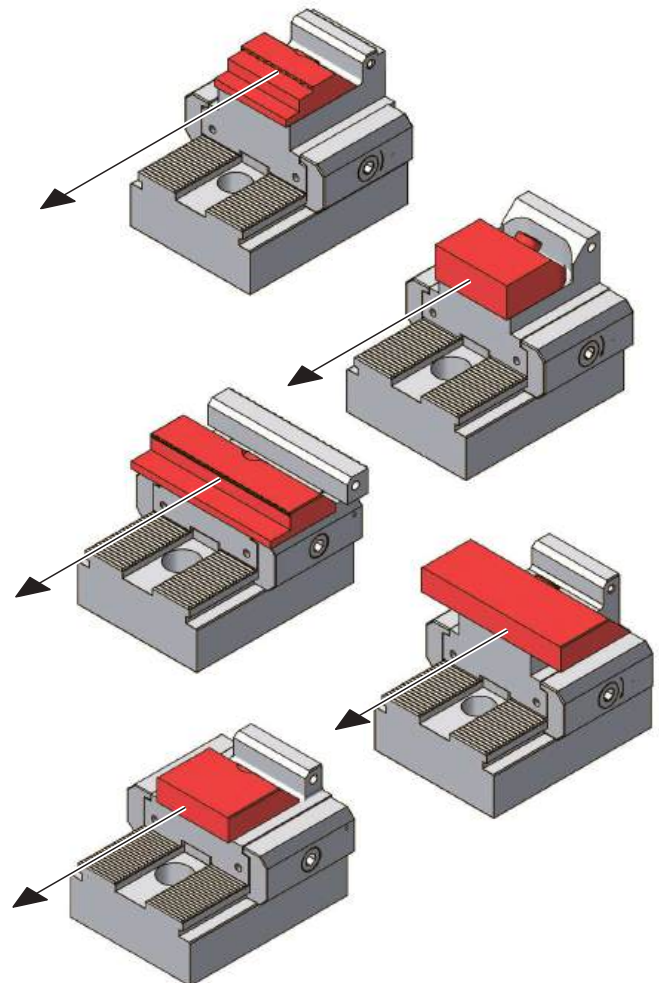
Facts for pull down clamp modules

Jaw range: 0- 4,1 mm
Clamping force: up to 2'800 daN

Advantages pull down jaws:

- Higher holding force
- With linear adaptable jaws
- Also with pull down jaws for the stop side available
- With adapter set can be changed to linear
- Also pull down jaws for datum face

**Linearspanmodule
Linear clamp modules**



Die Fakten beim Linearspannsystem

Verstellbereich: 0- 5,0 mm
Spannkraft: Bis 1'600 daN

Vorteile beim Linearspannsystem:

- Spannstockähnliches Spannen
- Prozesssichere Positionierung der zweiten Aufspannung
- Gut geeignet für die Erstellung von individuellen Formbacken
- Sicherer Halt mit Prägetechnik

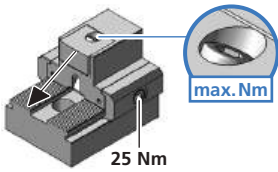
Facts for linear clamp modules

Jaw range: 0- 5,0 mm
Clamping force: up to 1'600 daN

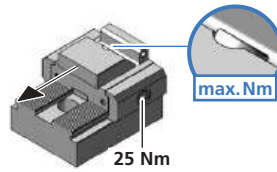
Advantages linear jaws:

- Similar clamp as conventional vise
- Good for shaped jaws
- Secure clamped with direct stamping jaws
- Higher accuracy

ACHTUNG / CAUTION



Niederzug Spannmodule
Pull adown module



Linear Spannmodule
Linear module

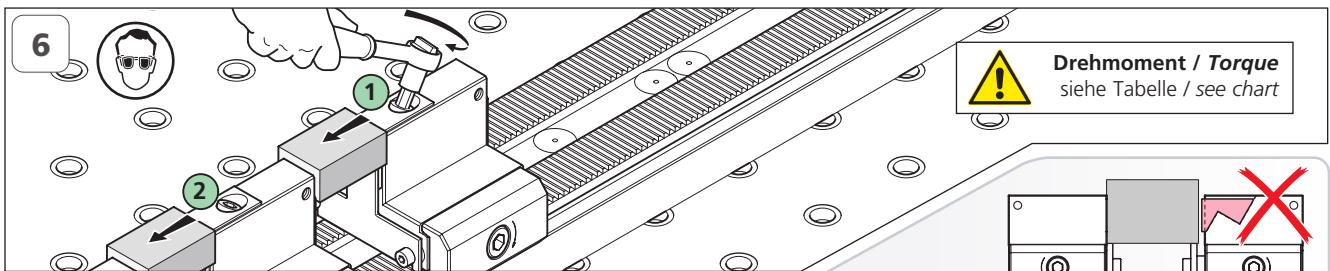
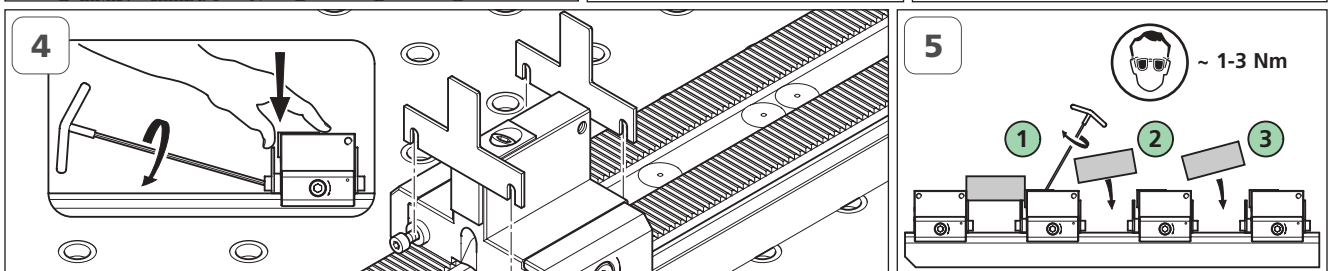
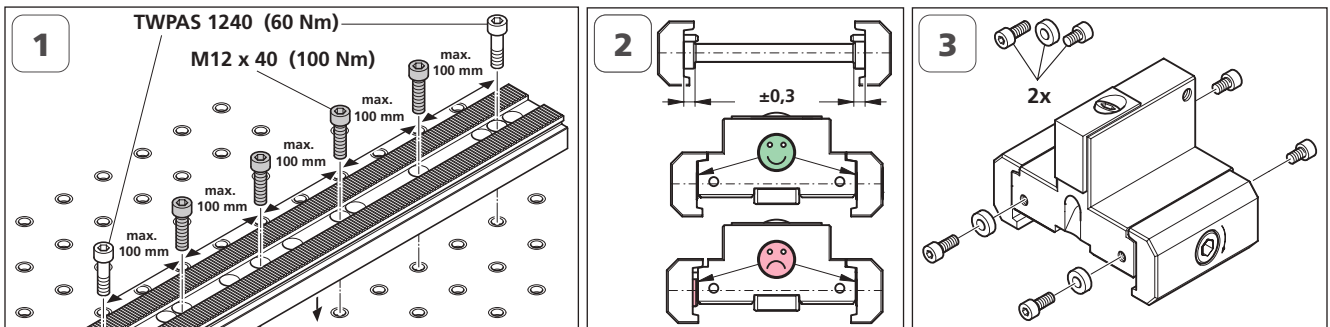


Schraube / Screw	Drehmoment / Torque		Spannkraft / Workholding force		
	Nm	(lb-ft)	~daN	~(lb)	~t
M5 + M6	4	3	= 500	1100	0,50
	5	3,7	= 580	1280	0,58
	6	4,4	= 690	1520	0,69
	7	5,2	= 780	1720	0,78
	8	5,9	= 880	1940	0,88
	9	6,6	= 980	2160	0,98
M6	10	7,4	= 1020	2250	1,02
	12	8,9	= 1220	2690	1,22
	14	10,4	= 1450	3200	1,45
M8	15	11	= 1520	3350	1,52
	4	3	= 410	900	0,41
	5	3,7	= 490	1080	0,49
	6	4,4	= 560	1230	0,56
	7	5,2	= 660	1450	0,66
	8	5,9	= 730	1600	0,73
	9	6,6	= 810	1790	0,81
	10	7,4	= 900	1980	0,90
	15	11	= 1520	3350	1,52
	20	14,8	= 1810	3990	1,81
M10	25	18,4	= 2100	4630	2,10
	10	7,4	= 400	880	0,40
	20	14,8	= 1400	3090	1,40
	30	22,1	= 2000	4410	2,00
	40	29,5	= 2800	6170	2,80

Schraube / Screw	Drehmoment / Torque		Spannkraft / Workholding force		
	Nm	(lb-ft)	~daN	~(lb)	~t
M8	10	7,4	= 400	880	0,4
	20	14,8	= 800	1760	0,8
	30	22,2	= 1200	2650	1,2
	40	29,6	= 1600	3530	1,6

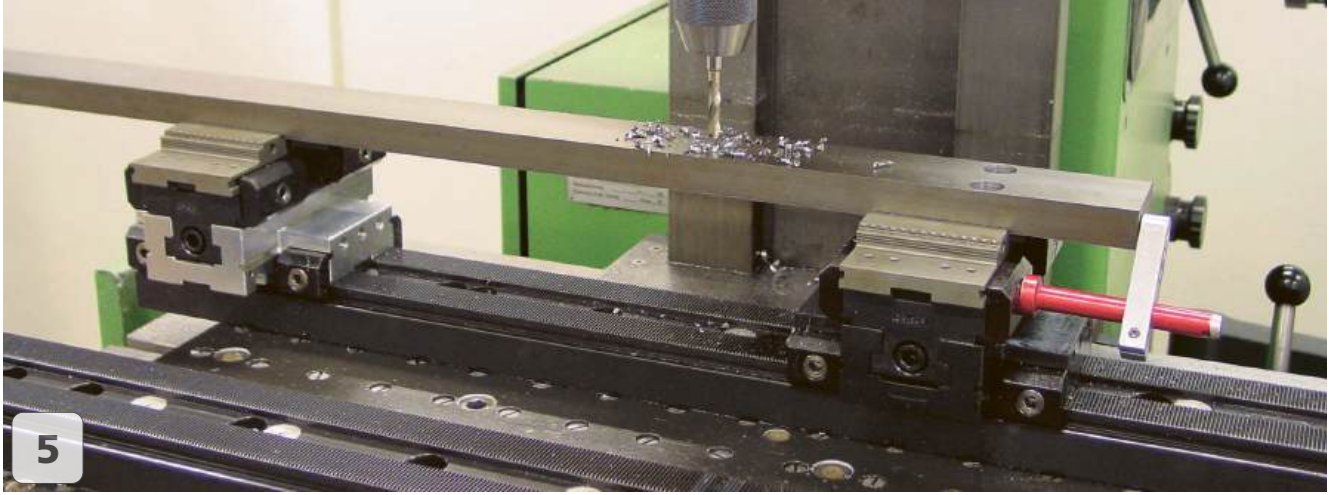
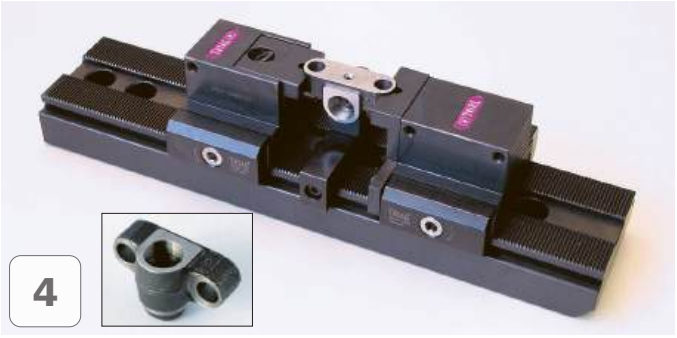
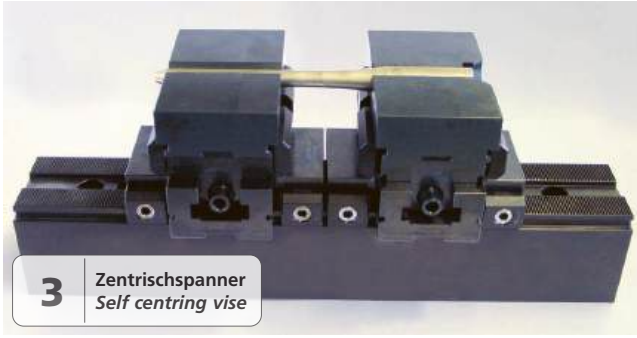
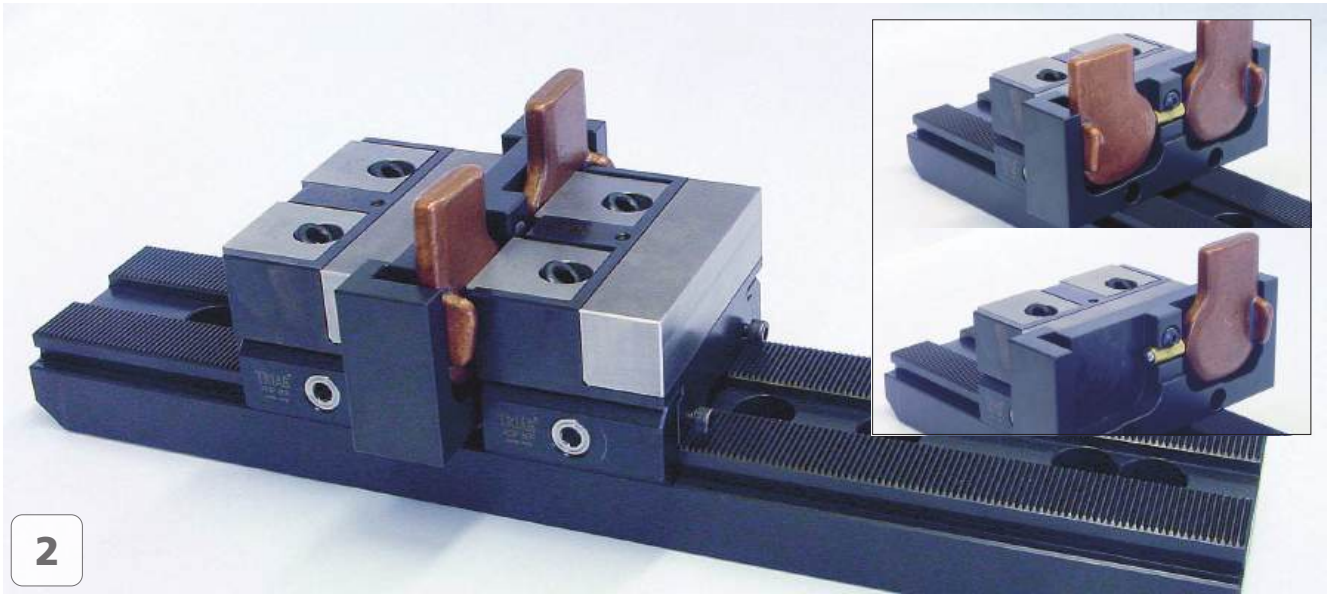
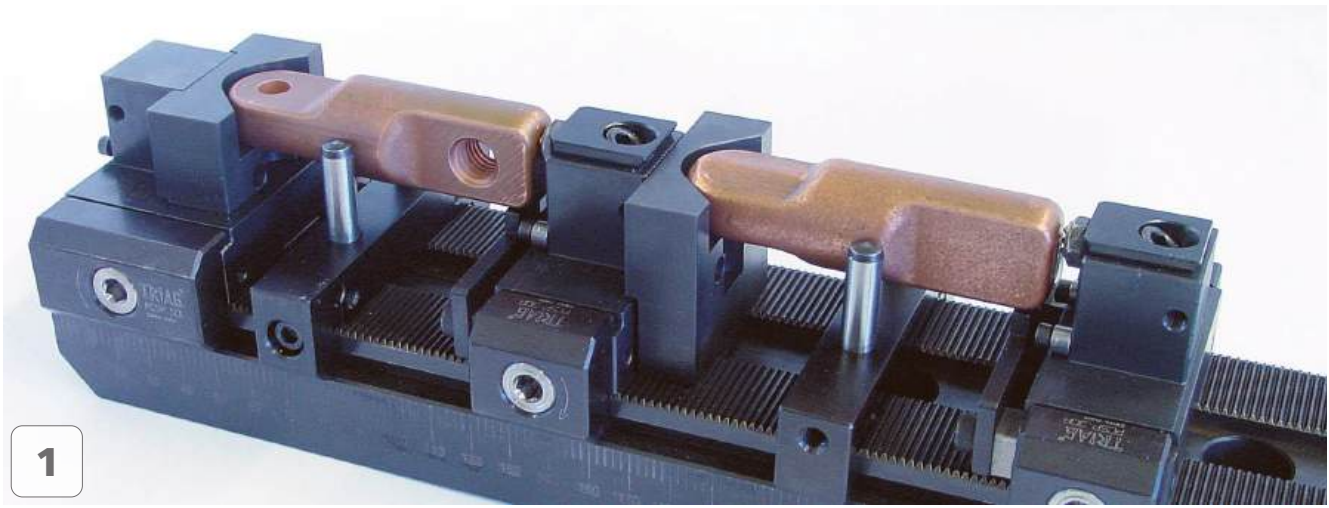
WICHTIG: Die angegebenen Drehmomente sind die absoluten Maximalwerte. Über die Spannkraften geben die Tabellen Auskunft.

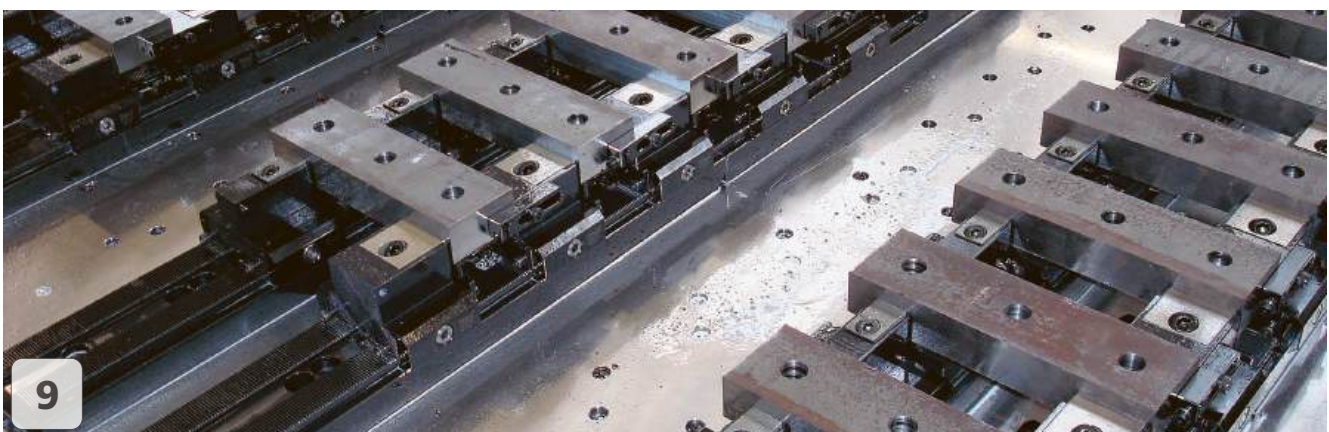
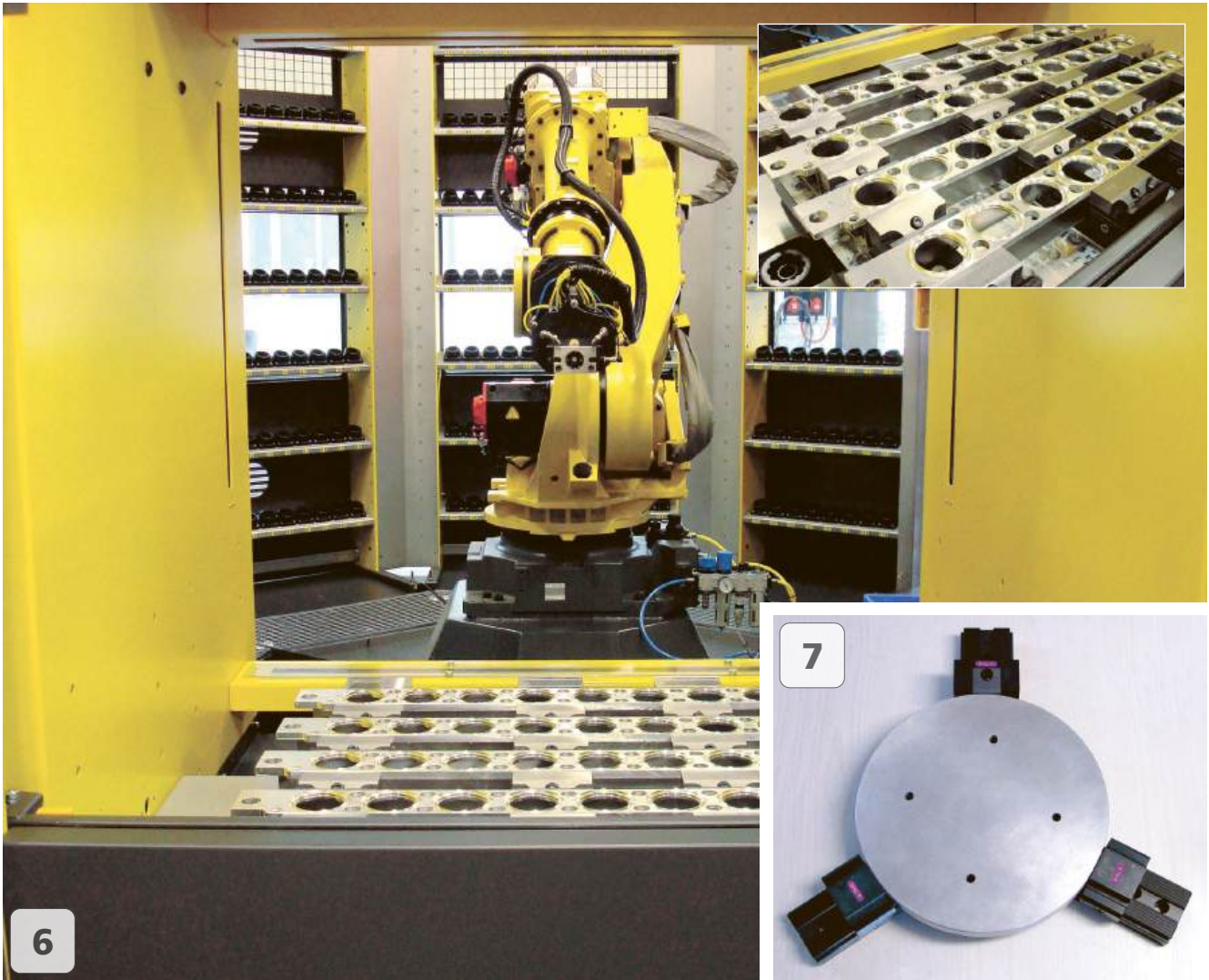
IMPORTANT: The torque numbers specified represent the absolute maximum. The table at the bottom of this page provides further information on the workholding forces.

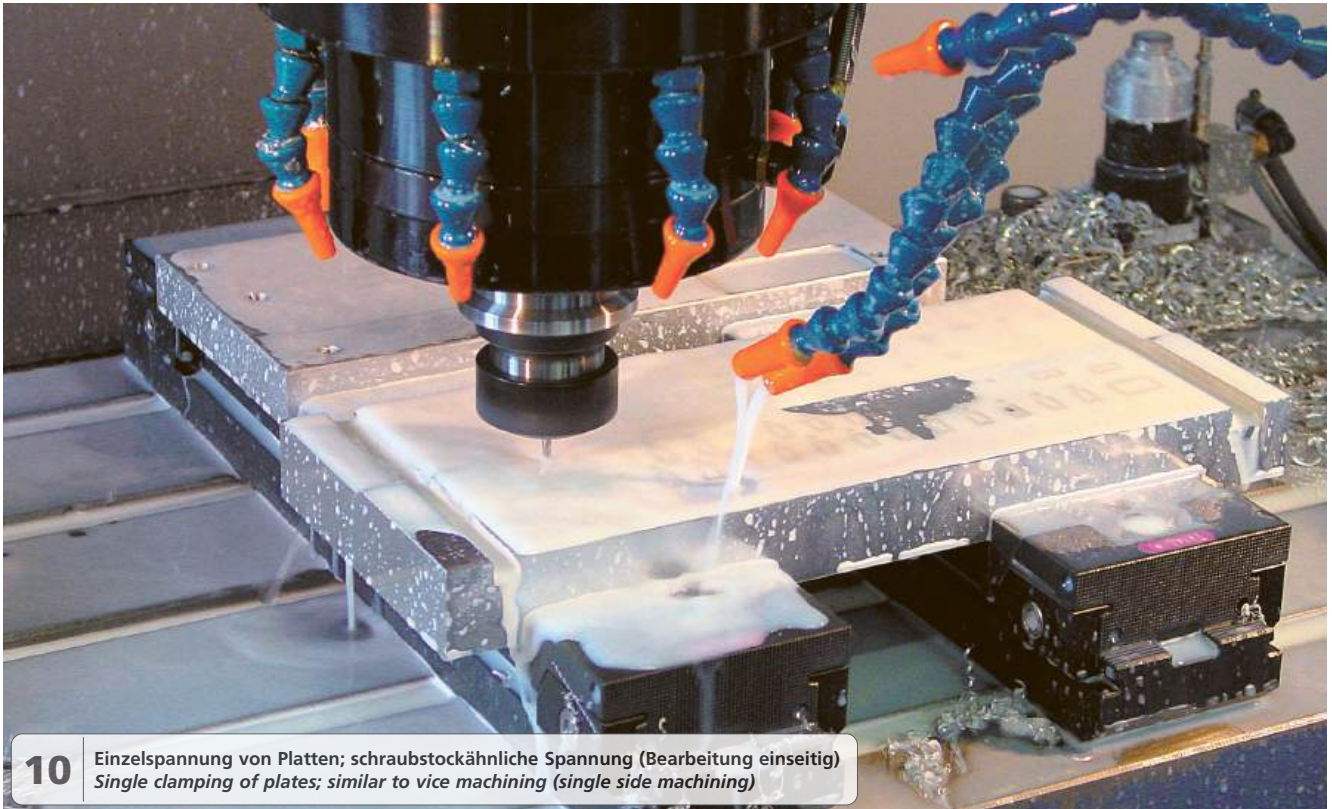


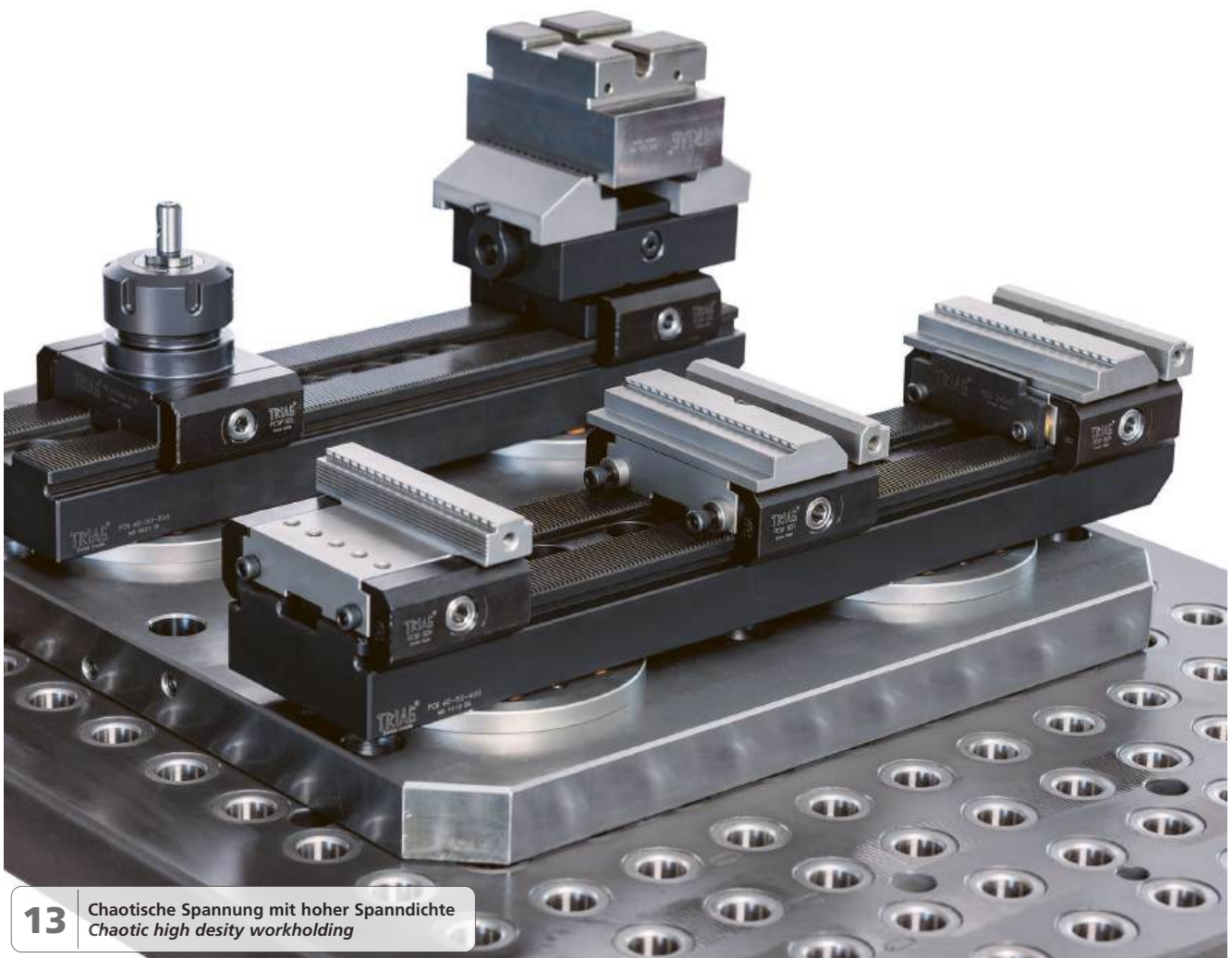
7 WICHTIG: Vor dem Positionieren der Spannmodule für ein neues Werkstück, ist die **Spannbacke ganz zurück zu stellen**, dies gewährleistet eine sichere Spannung!

IMPORTANT: Prior to setting up a new clamping module the **clamping jaw of the vice module must be retracted all the way!** This guarantees proper clamping of the new workpiece.

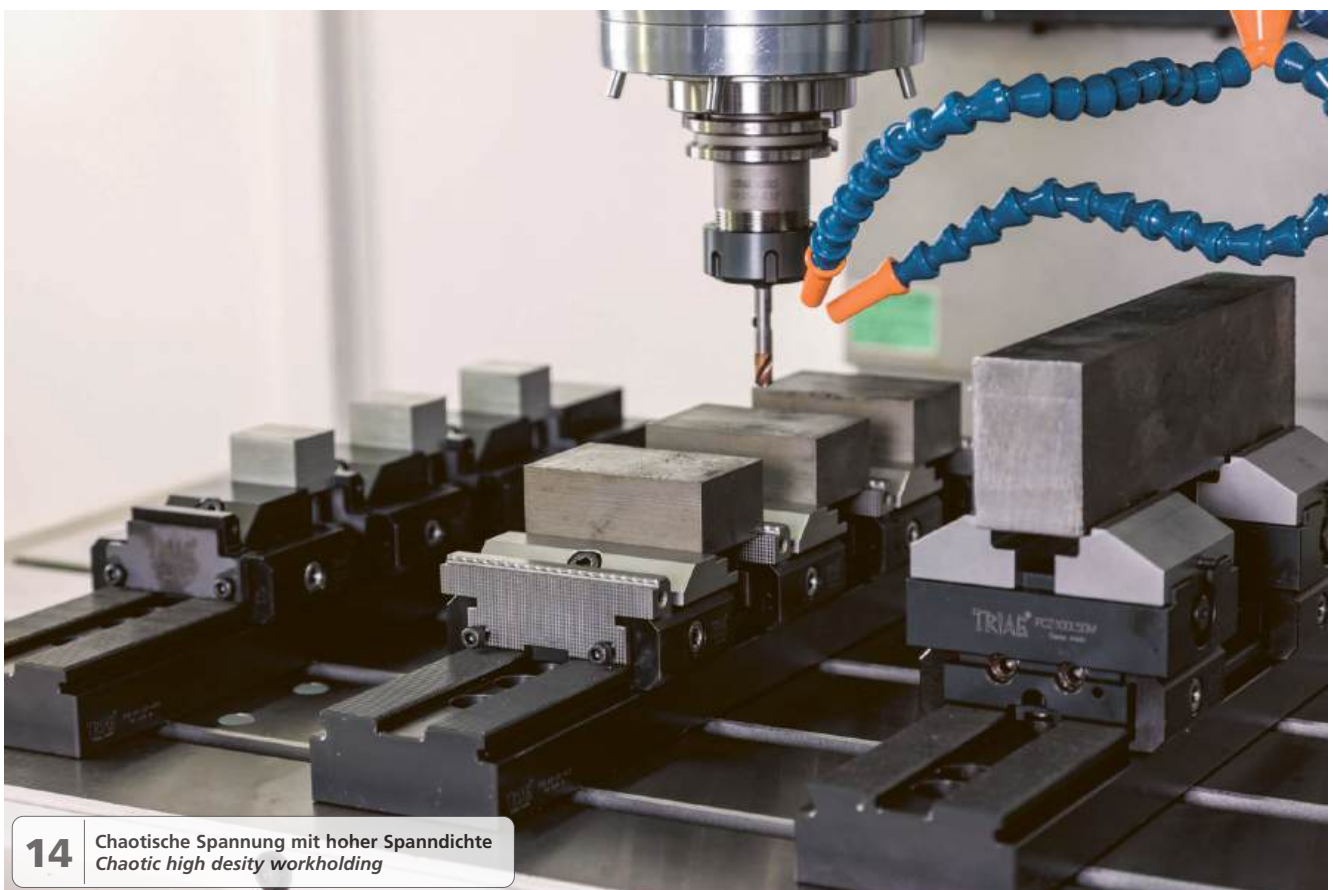




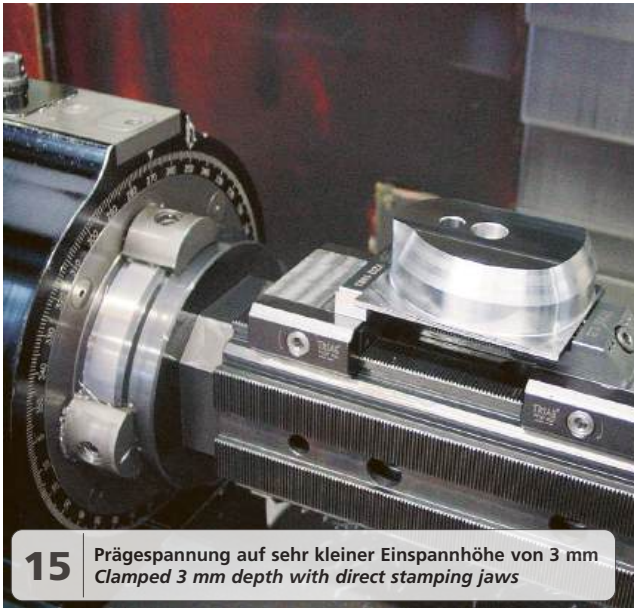




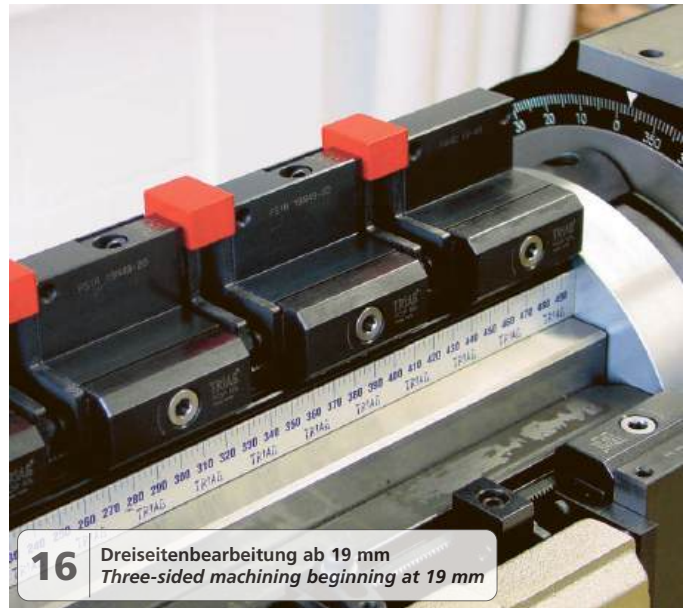
13 Chaotische Spannung mit hoher Spanndichte
Chaotic high density workholding



14 Chaotische Spannung mit hoher Spanndichte
Chaotic high density workholding



15 Prägespannung auf sehr kleiner Einspannhöhe von 3 mm
Clamped 3 mm depth with direct stamping jaws



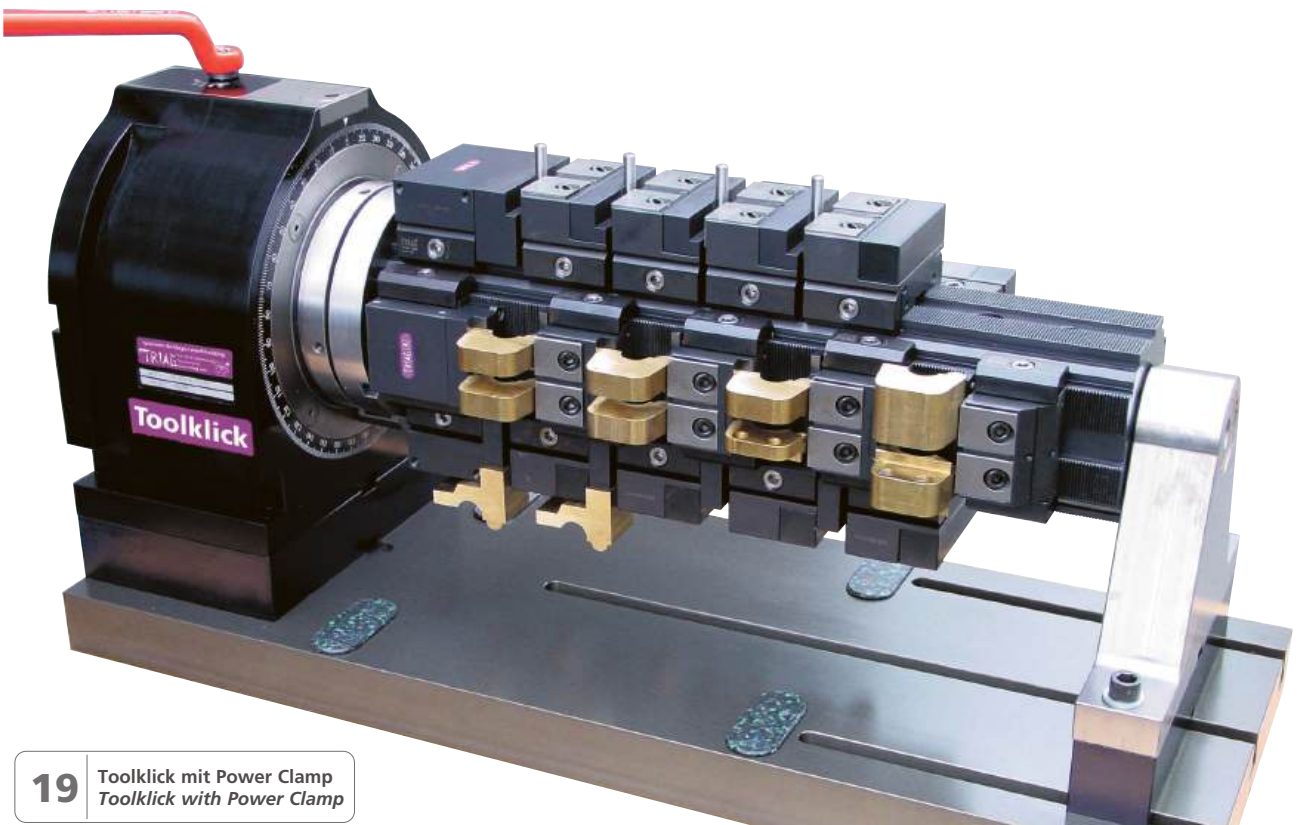
16 Dreiseitenbearbeitung ab 19 mm
Three-sided machining beginning at 19 mm



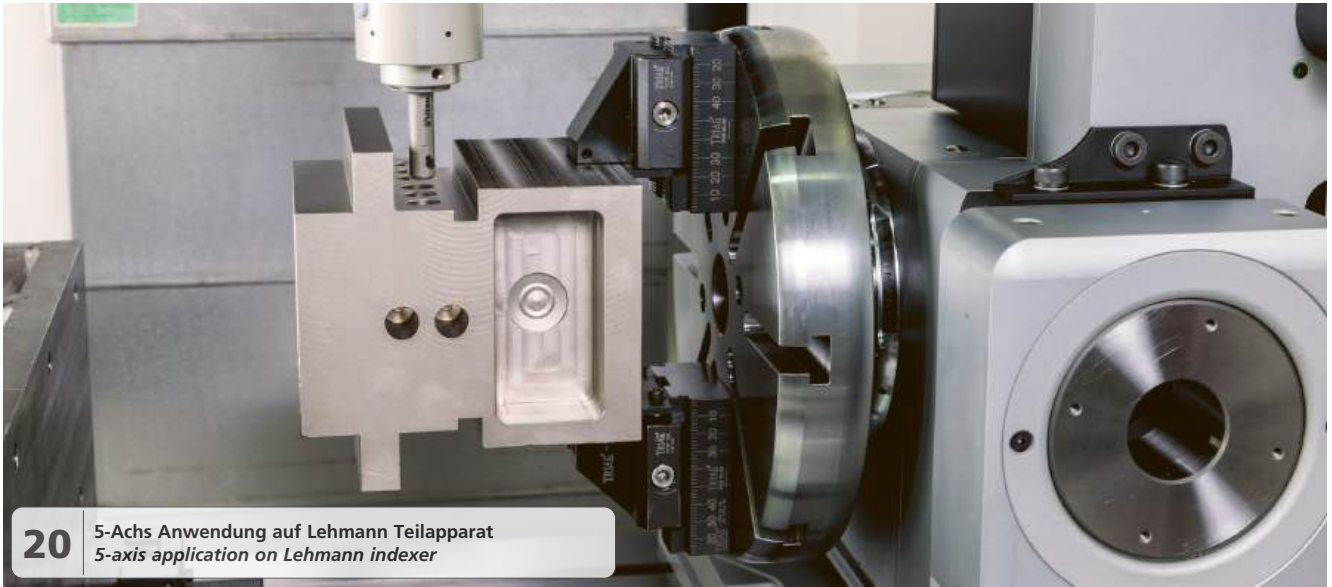
17 ... im Einsatz auf der 4. Achse
... in action on the 4th axis



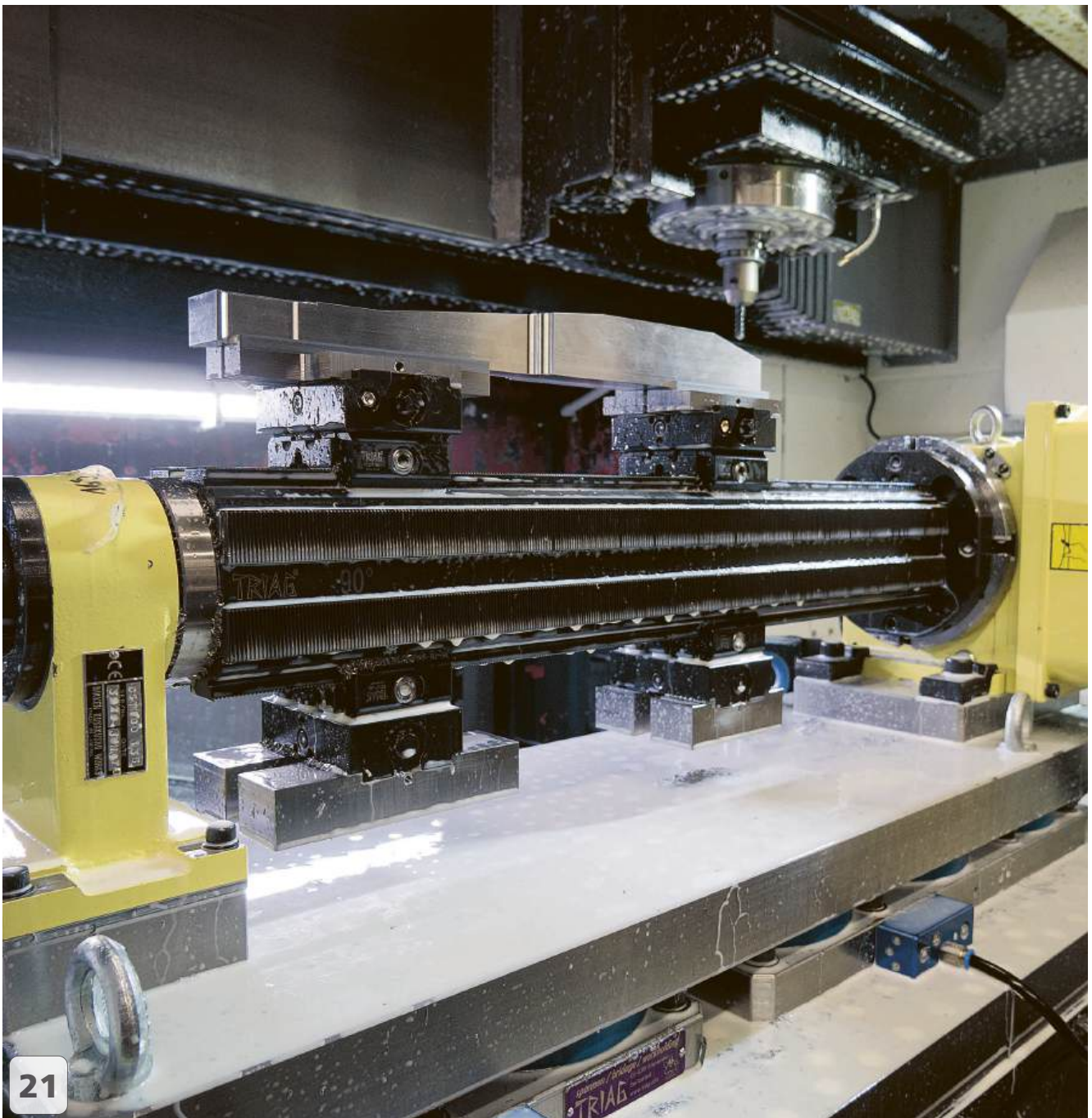
18 Das Triag Power Clamp im Einsatz als Spannstock (Starterset)
Triag Power Clamp in action as machine vise (starter set)



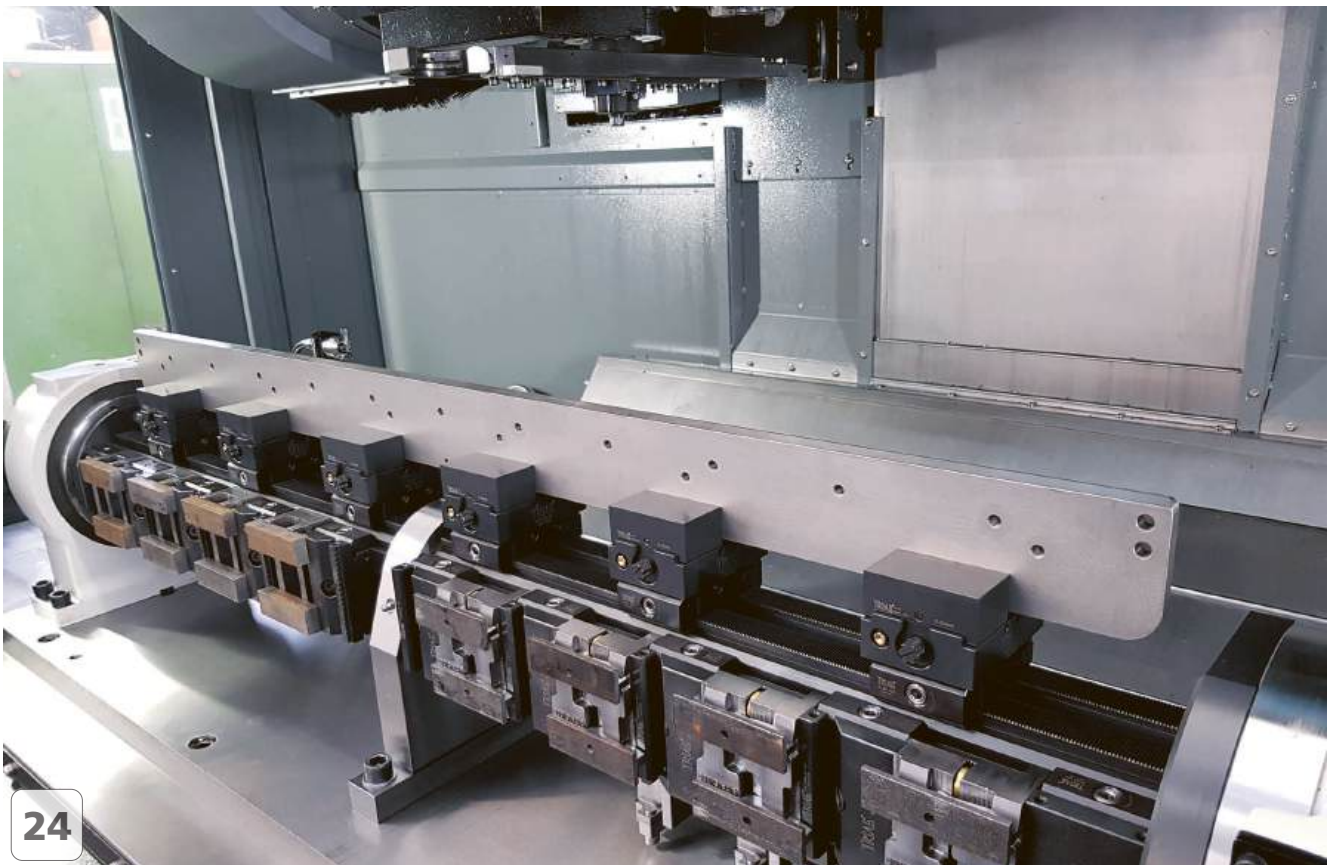
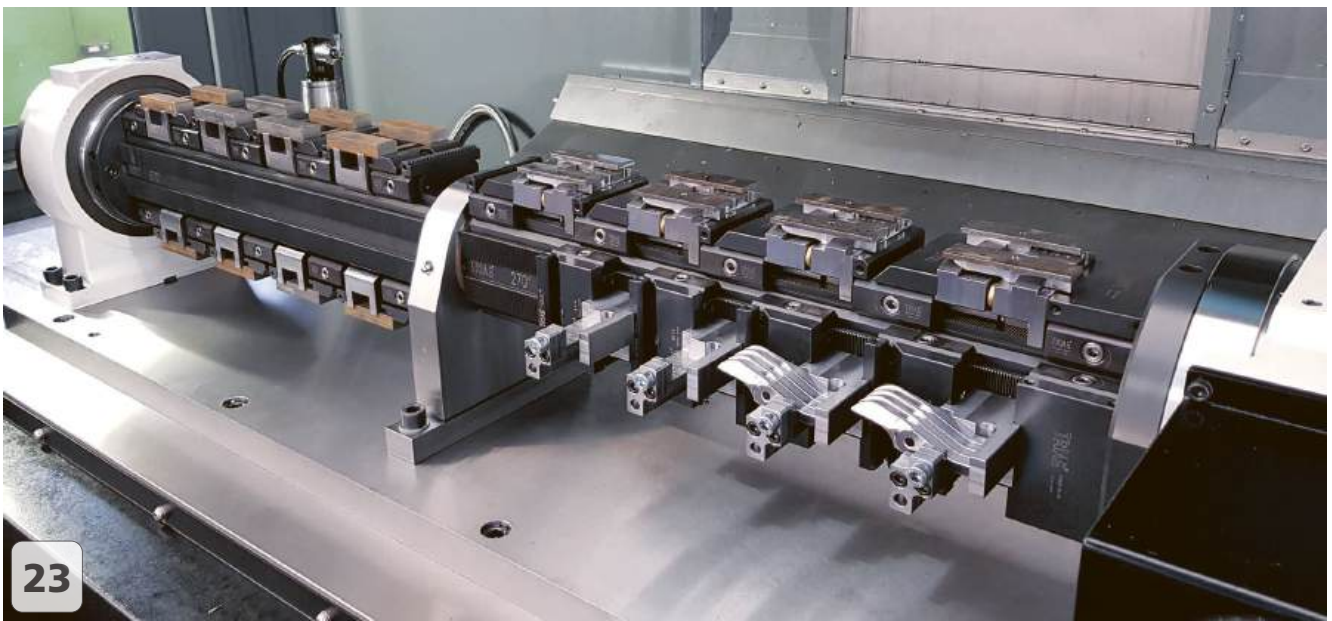
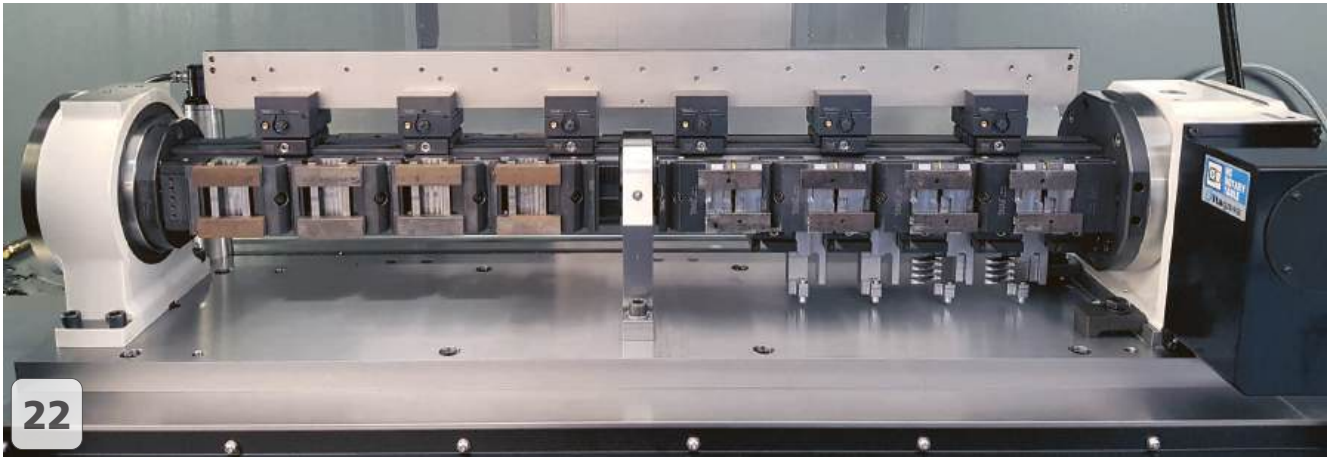
19 Toolclick mit Power Clamp
Toolclick with Power Clamp

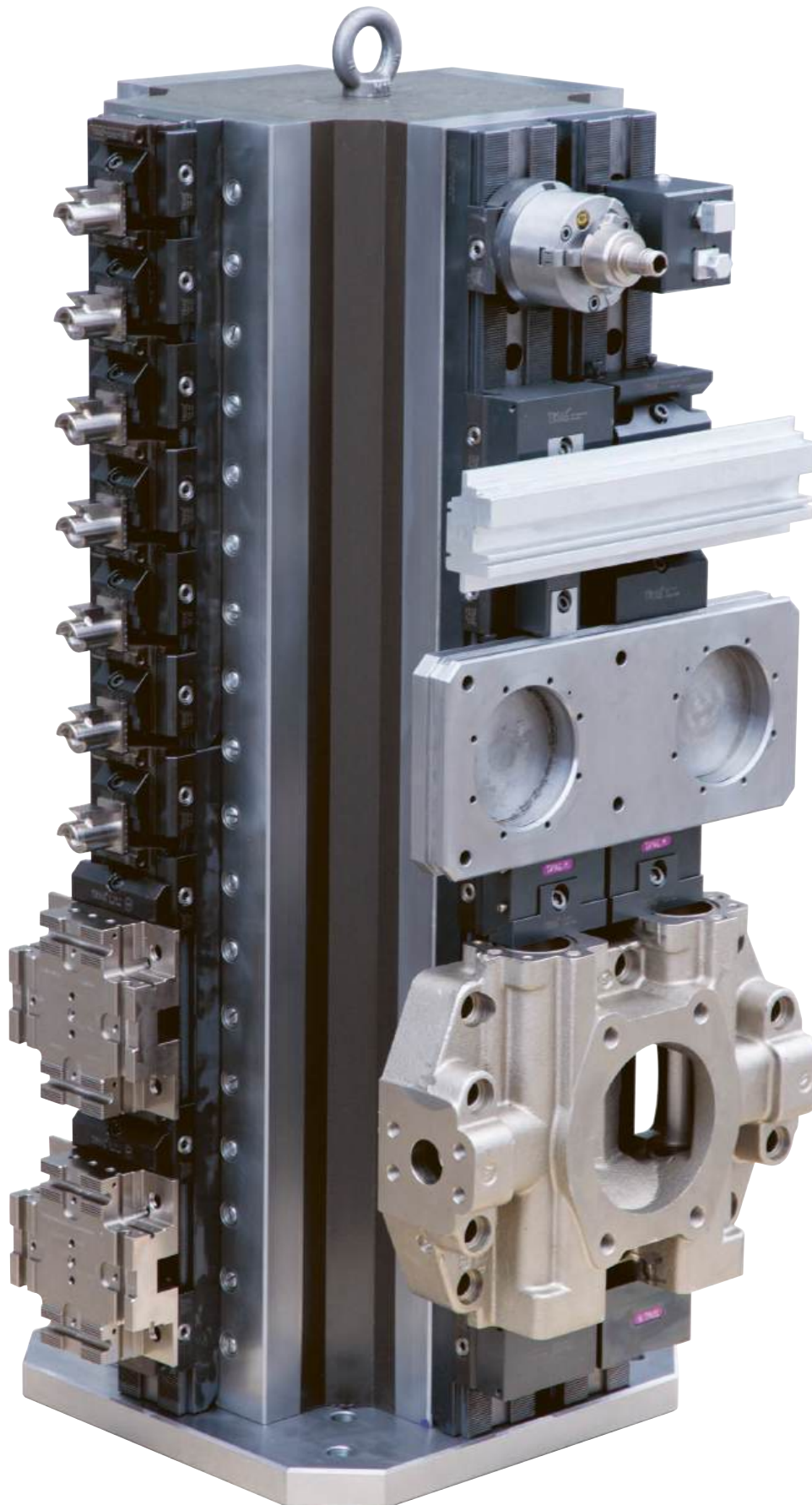


20 5-Achs Anwendung auf Lehmann Teilapparat
5-axis application on Lehmann indexer



21



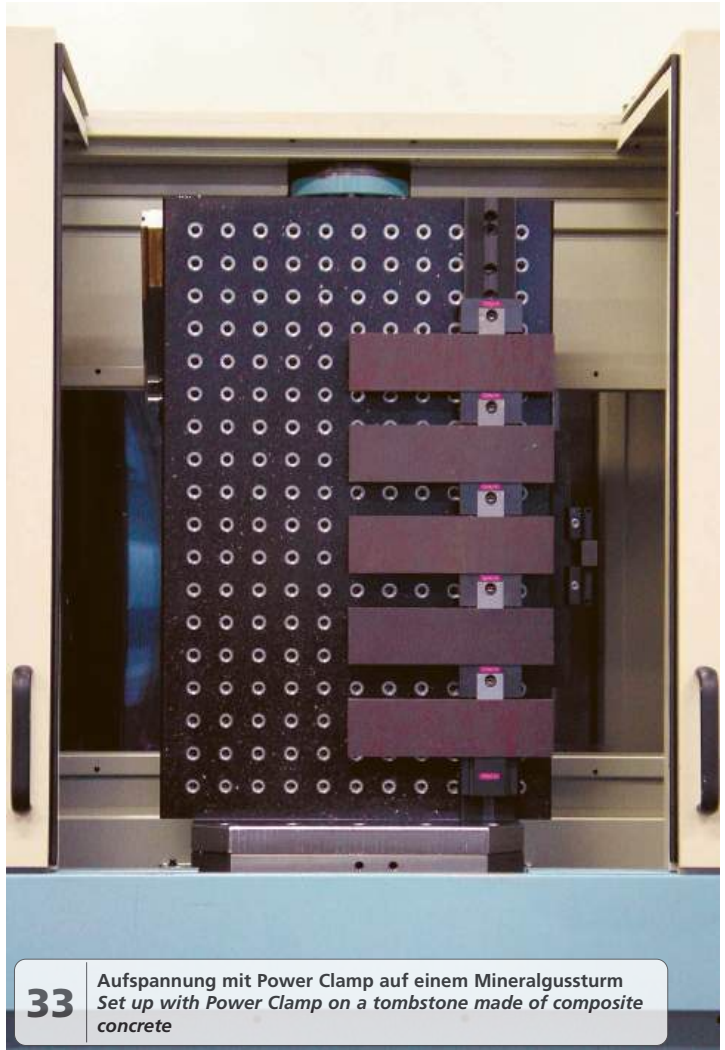


25 tripoxyMINERAL Kreuzturm mit PowerCLAMP Schienen für chaotische Spannung
tripoxyMINERAL Cross version with PowerCLAMP baserails for chaotic workholding

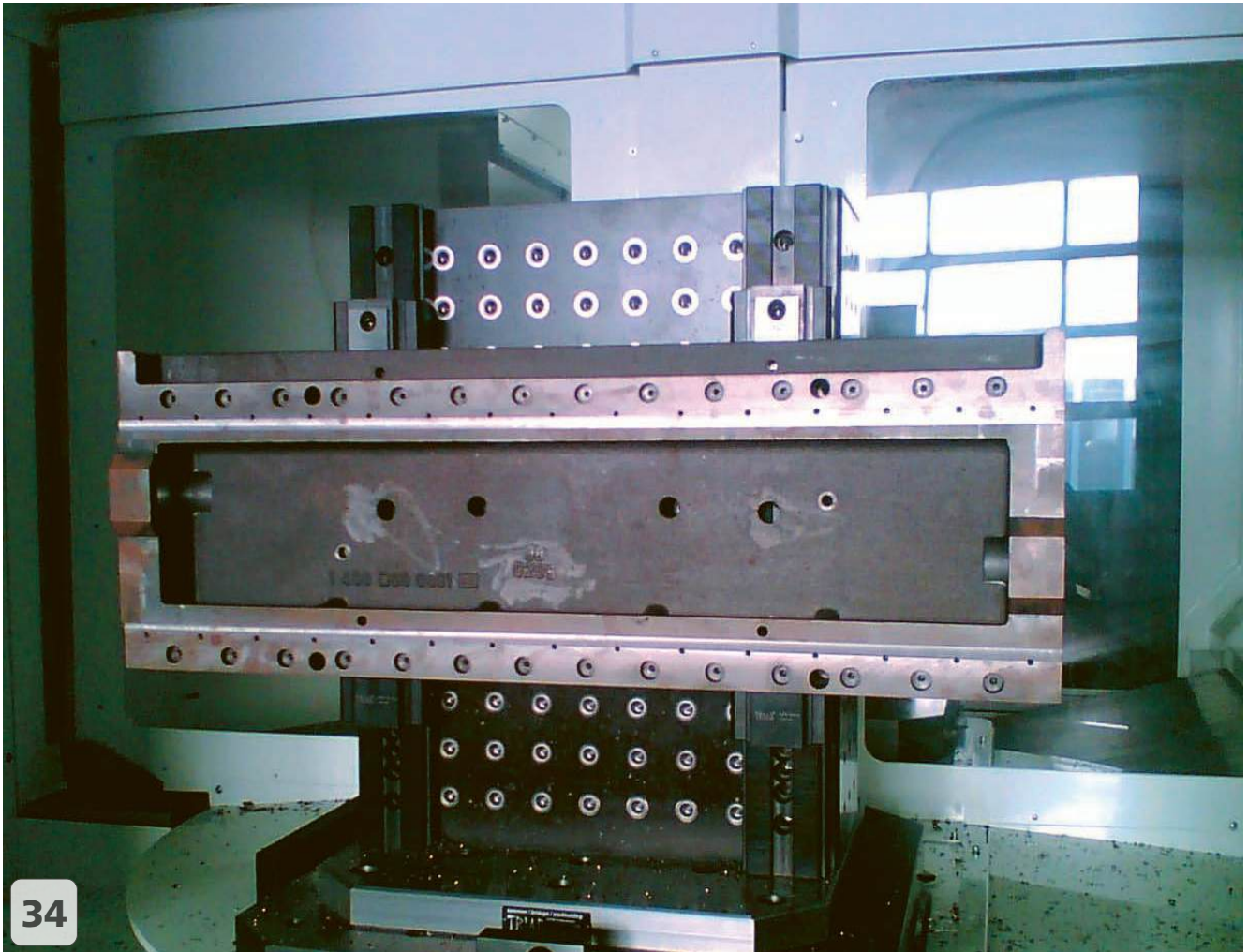
31 tripoxyMINERAL mit unterschiedlichen Werkstücken bestückt
tripoxyMINERAL tombstones holding a variety of workpieces



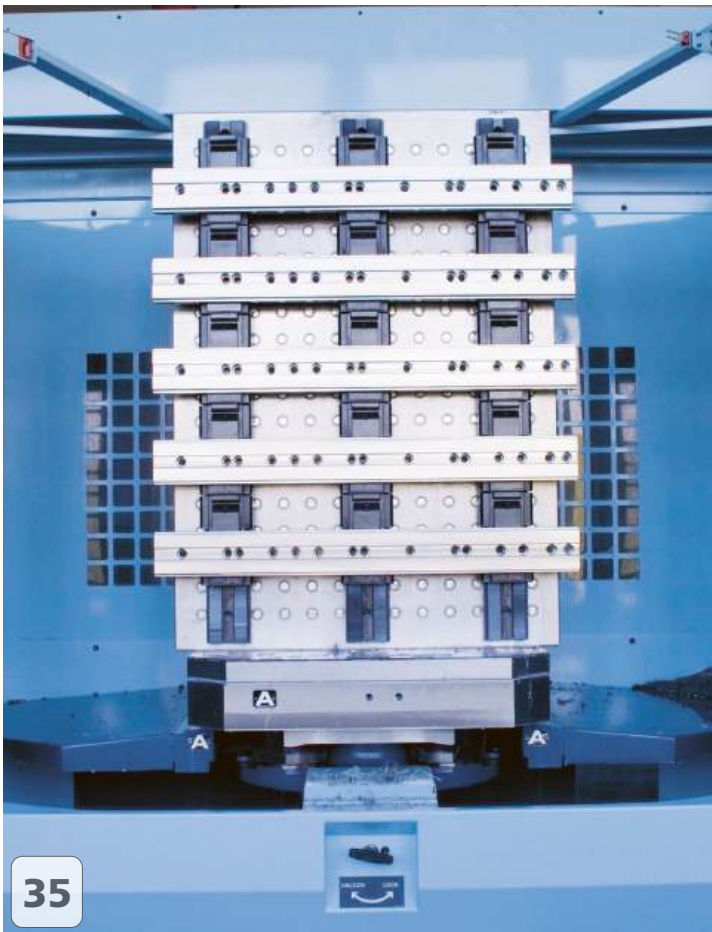
32 Zentrischspanner auf einem Spezialturm
Centric vices installed on a special tombstone



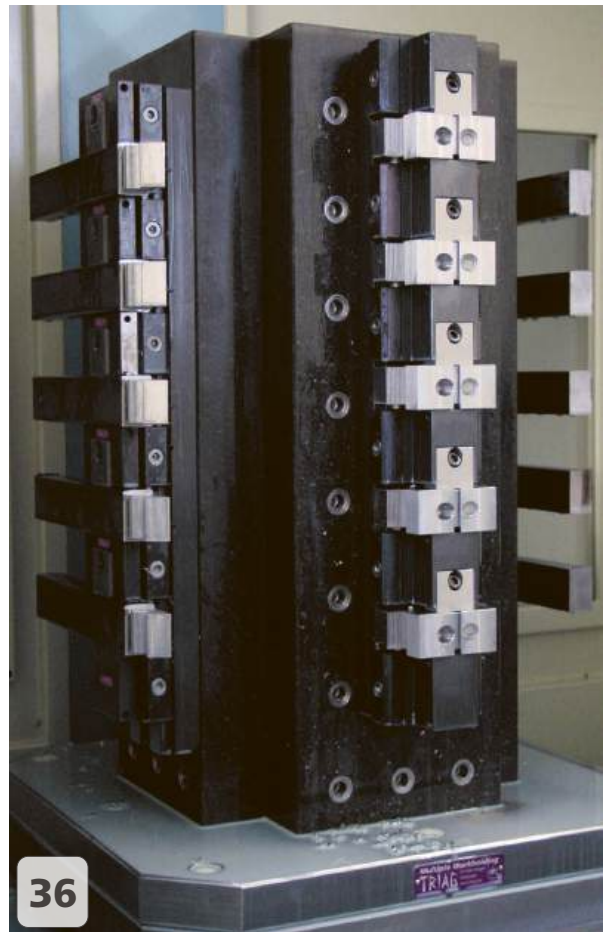
33 Aufspannung mit Power Clamp auf einem Mineralgussturm
Set up with Power Clamp on a tombstone made of composite concrete



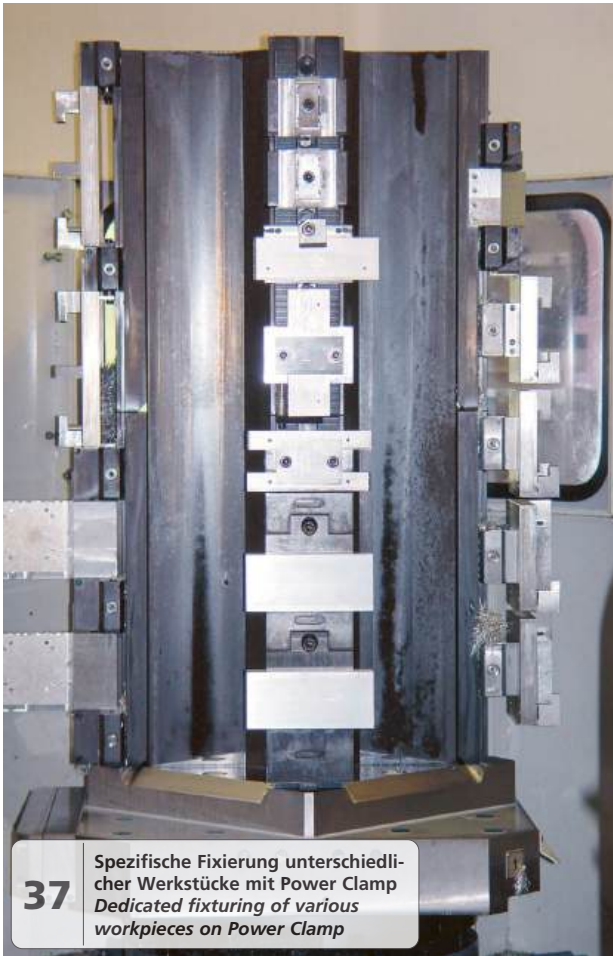
34



35



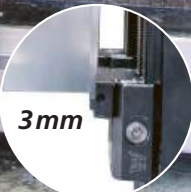
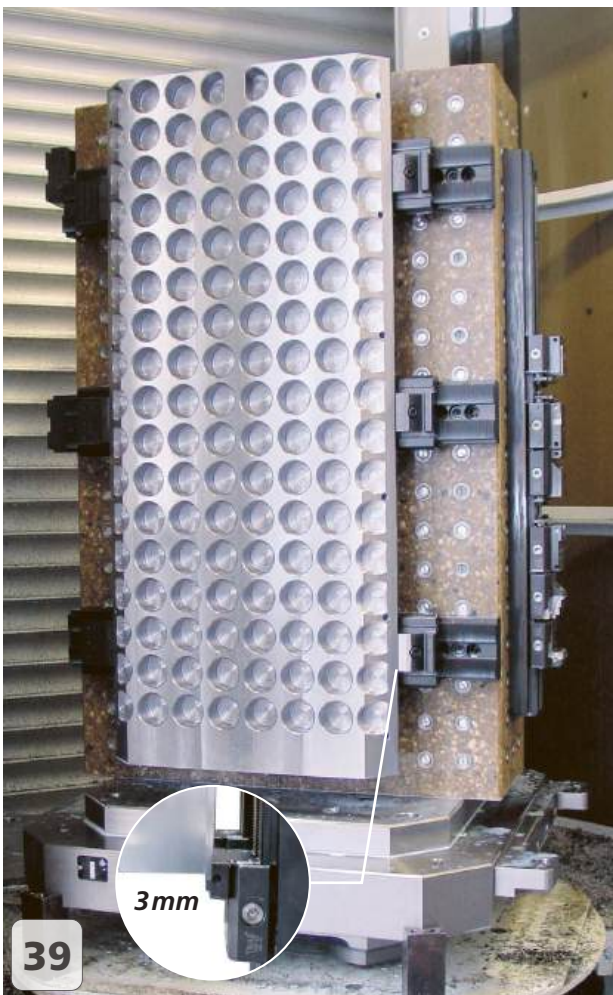
36



37 Spezifische Fixierung unterschiedlicher Werkstücke mit Power Clamp
Dedicated fixturing of various workpieces on Power Clamp



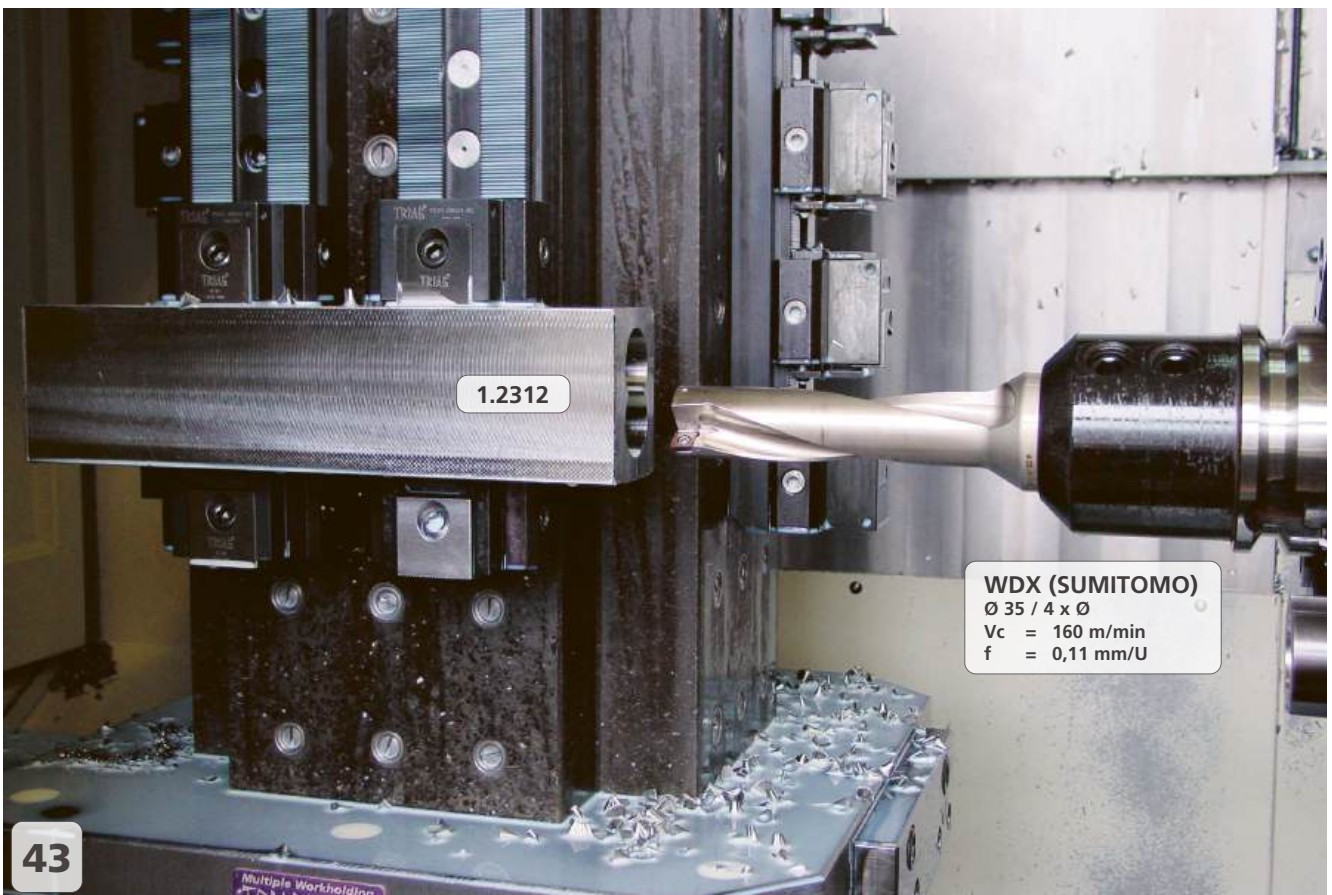
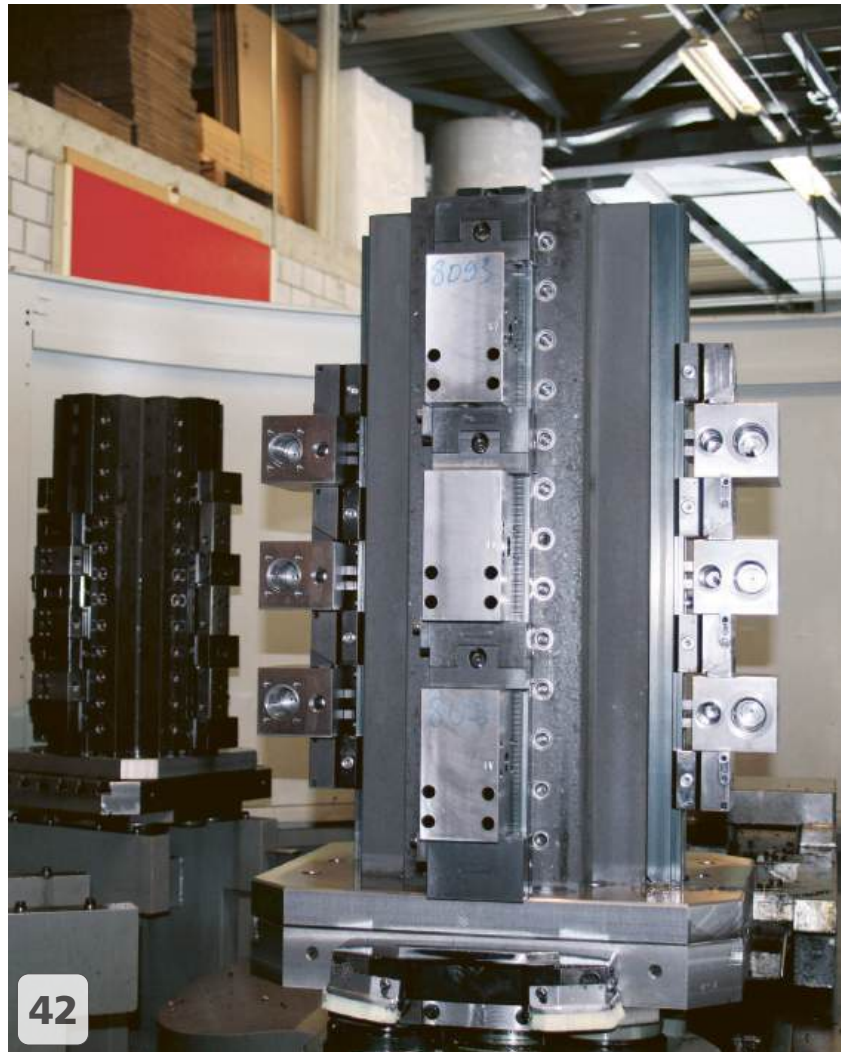
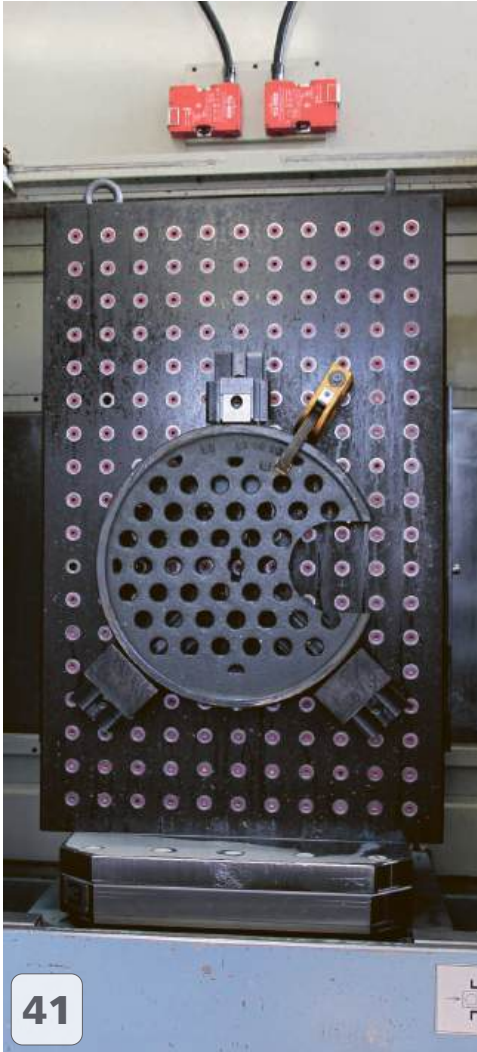
38 Prägespannung auf sehr kleiner Einspannhöhe von 3 mm
Clamped 3 mm depth with direct stamping jaws

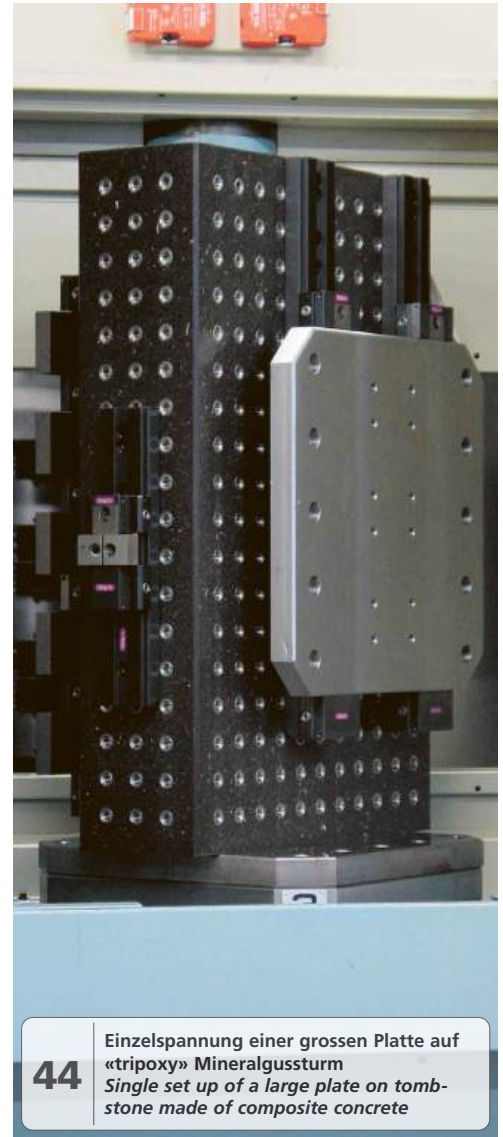


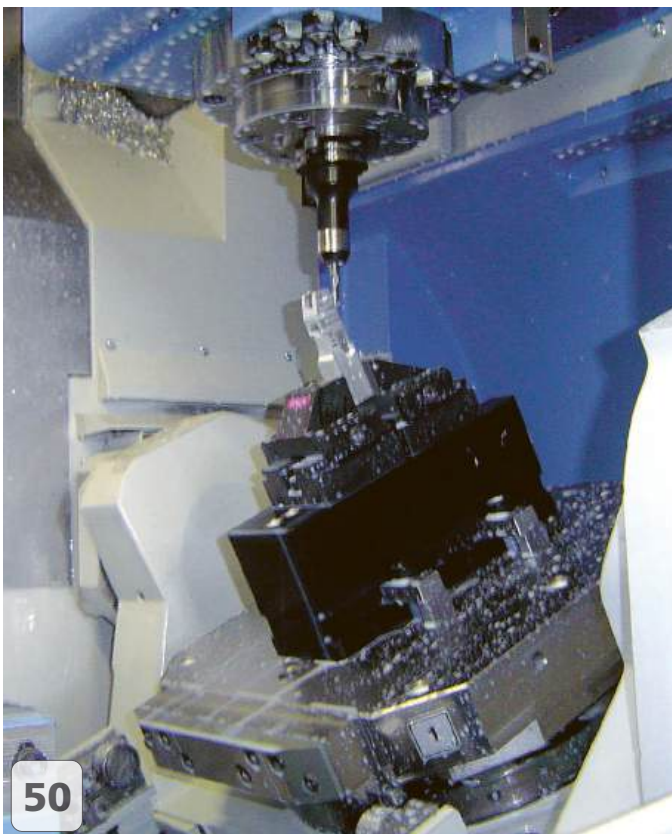
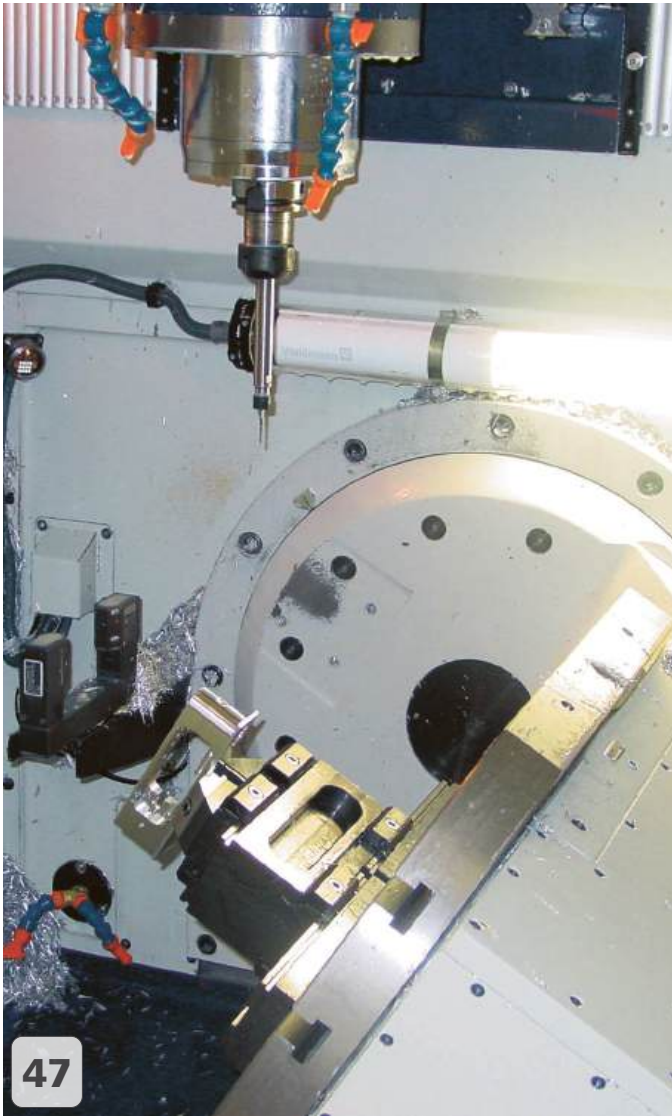
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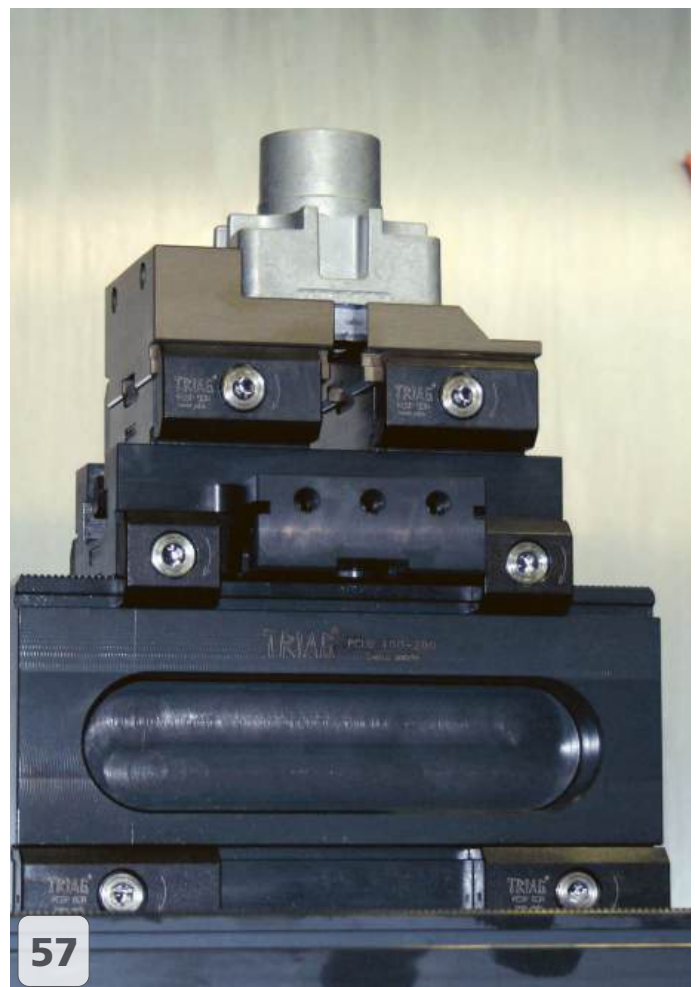
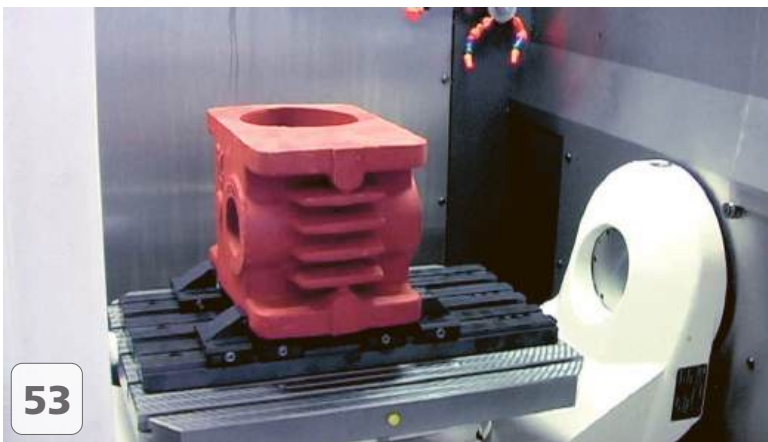


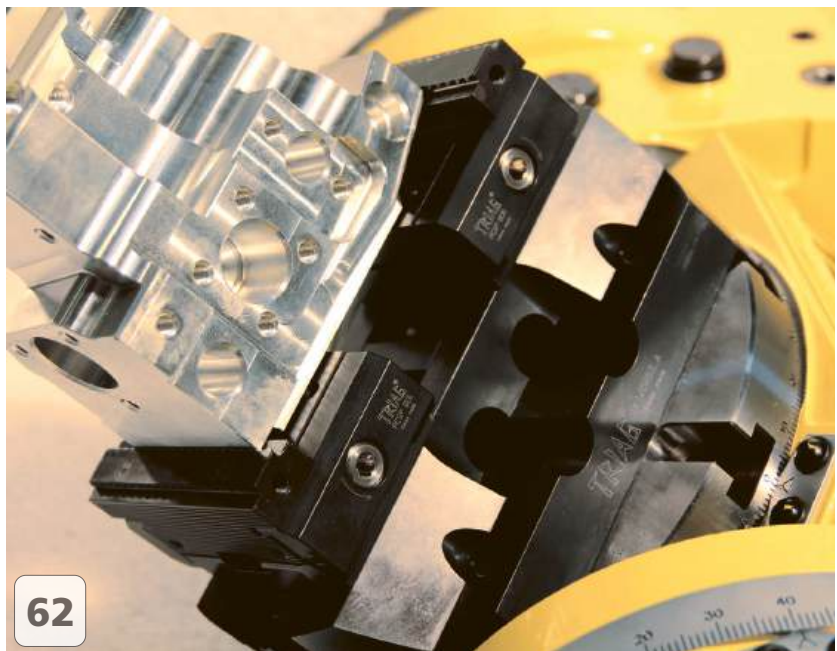
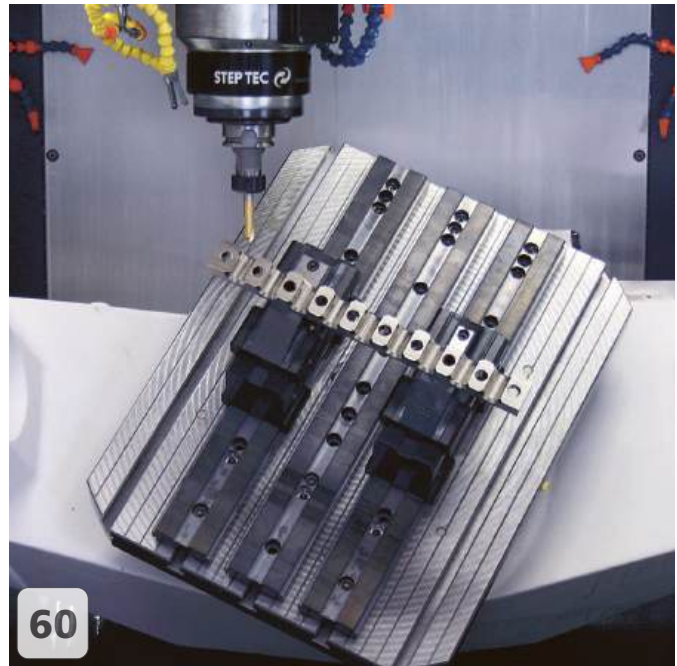
40 Aufspannung mit Power Clamp auf einem „Tripoxy“ Mineralgussturm
Set up with Power Clamp on a tombstone made of composite concrete











Modulares Mehrfachspannen auf 5-Achsen-Maschinen

Immer öfter werden die 5-Achsen-Maschinen in den Produktionsabläufen eingesetzt, um den Ansprüchen der heutigen effizienten Herstellung gerecht zu werden und weltweit wettbewerbsfähig zu bleiben. Die Werkstückspannung ist sehr anspruchsvoll und fordert die technischen Mitarbeiter ausserordentlich, wie auf den nachfolgenden Bildern dargestellt.

Modular workholding system for 5-axis machines

Increasingly, the 5-axis machines are used in the production processes to be in accordance with the demands of today's efficient manufacturing and remain globally competitive. The workpiece clamping is very demanding and calls for extremely technical staff, as shown on the following pictures.

Vorteile der Triag 5-Achsen Spannsysteme:

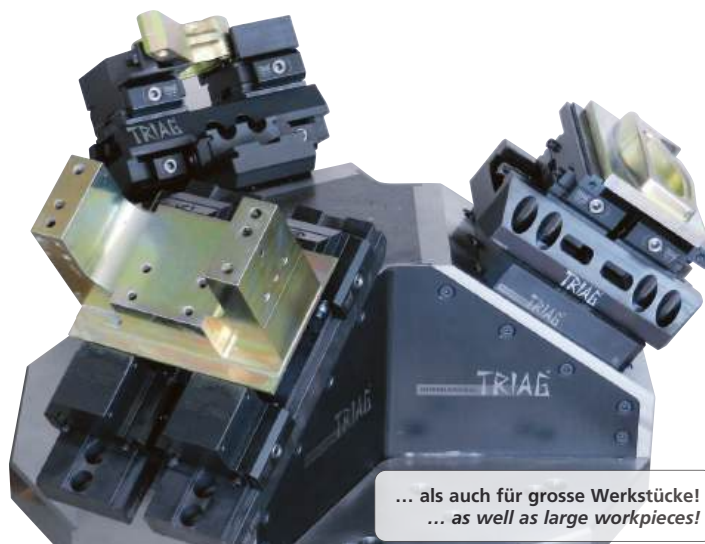
- Die unteren Basisschienen dienen sowohl als mechanisches Nullpunktspannsystem, aber auch als Spannstock.
- Die Spannkraft wirkt direkt beim Werkstück, trotzdem ist das Werkstück ob klein, lang oder gross mit kurzen Werkzeugen sehr gut zugänglich. (Die Einschränkung ist der Maschinentisch)!
- Bei der Dreiseitenbearbeitung ist auch Mehrfachspannung möglich.
- Es können über 200 verschiedene Spannmodule, sowie Rohmodule, Zentrischspanner, Dreibackenfutter, Spannzangenfutter, Vakuumspannmodule usw. aufgesetzt werden. Die Schnittstelle ist immer dieselbe.
- Sehr schnelles Umrüsten!
- Wenig Reinigungsaufwand, da keine T-Nuten vorhanden sind.
- Besonders gut geeignet für 5-Achsen-Maschinen. Alle Spannvorrichtungen können auch auf Horizontal- und Vertikalmaschinen universell eingesetzt werden.

Benefits of Triag 5-axis workholding systems:

- The lower base rails serve both as a mechanical zero-point clamping system, but also as a vice.
- The tension acts directly at the workpiece, the workpiece is still, whether small, long or large, very accessible with short tools. The constraint is the machine table!
- 3-side machining is possible as well.
- There may be placed over 200 different clamping modules, as well as raw modules, self-centring modules, three jaw chuck, collet chuck, vacuum clamping modules and so on. The interface is always the same.
- Very fast setup!
- Reduced cleaning required, since no T-slots available.
- Especially suitable for 5-axis machines. All clamping devices can also be used universally on horizontal and vertical machines.



Geeignet sowohl für kleine ...
Especially suited for small ...



... als auch für grosse Werkstücke!
... as well as large workpieces!

System System		bei Anschlagmodulen for end module		Modulnutzbreite Module clamping width		Modulnutzhöhe Module clamping height	
A	Apto Clamp	N	nitriergehärtet nitrated	19		34	
P	Power Clamp	D	durchgehärtet through hardened	25			
C	Compact Clamp	bei Spanmodulen for vice modules		26			
M	Micro Clamp	1	Anzahl Spannbacken Number of jaws	34			
V	Vorrichtungsbaumodule Workholding modules for dedicated fixtures	2		43			
		3		48			
		-	keine Spannbacke no clamping jaw	58			
				61			
				68			
				78			
				94			
				125			

P S 1 R 48 N 34 -80

Modultyp Type of module	
A	Anschlagmodul End module
S	Spannmodul Clamping module
T	Trägermodul Supporting module
R	Rohling Blank

Anschlagfläche der Module Datum face	
F	Anschlagfläche glatt Datum face flat
R	Anschlagfläche geriffelt Datum face double serrated
D	eine Seite glatt, eine Seite geriffelt one face flat, one face double serrated
G	Anschlagfläche gerillt Datum face serrated
X	spezielle Ausführung special execution
5X	5axes Clamp
P	Fläche unterhalb der Prägung gerillt Area below the stamping serrated
PF	Fläche unterhalb der Prägung glatt Smooth surface below the stamping
PV	Präge vorstehend, Fläche unterhalb der Prägung glatt Stamping protruding, surface below the stamping flat
P6	prägen / stamping

Backenhub Stroke of clamping jaw	
N	Niederzug Pull down
L	linear / parallel linear / parallel
-	ohne Spannbacke no clamping jaw

Spannbackentyp Type of clamping jaw	
B01	Spannbacken Clamping jaws
- B313	
-013	Modul ohne Spannbacken Module without clamping jaw
-105	



Die Basisschiene ist die Grundlage des Power Clamp Spannsystems

The serrated base rail is the basic structure of the Power Clamp workholding system

Der Einsatz der Basisschiene als Modularspannstock ist jedem Mechaniker ein Begriff. Die Vorteile ihres Einsatzes als mechanisches Nullpunktsystem sind in der Zwischenzeit ebenfalls ins Planungsdenken der mechanischen Fertigung eingeflossen.

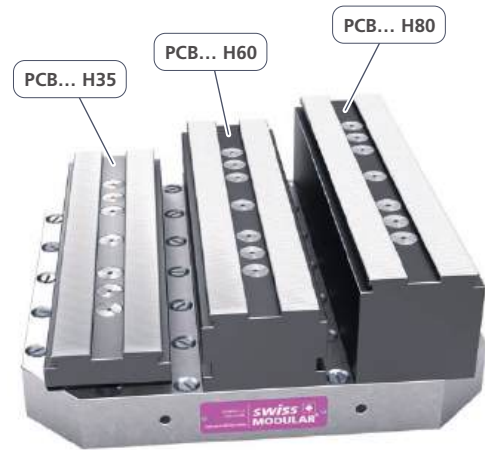
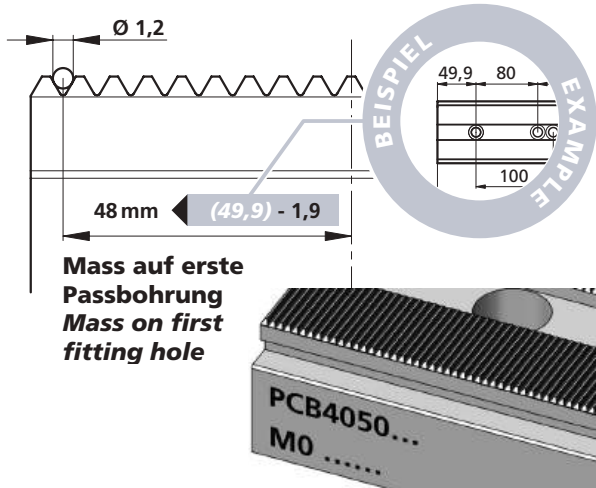
Using the base rail as a modular workholding vise is standard practice to any mechanic. The advantages of using it as a zero point system have also widely influenced the planning stages of mechanical production.

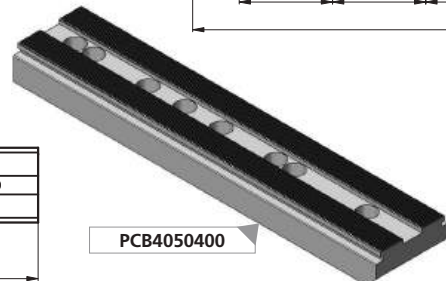
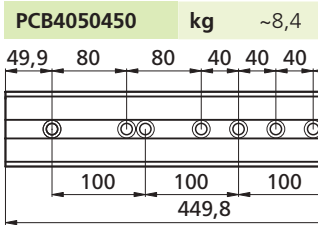
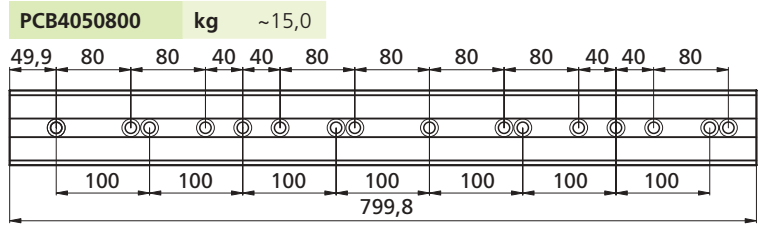
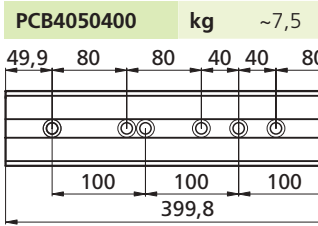
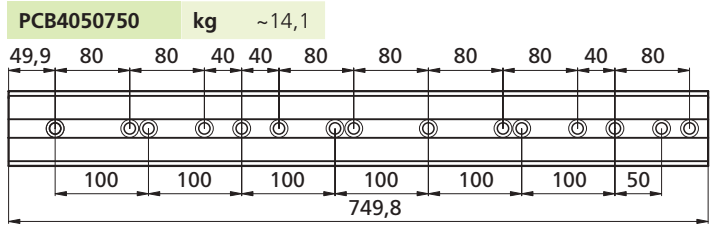
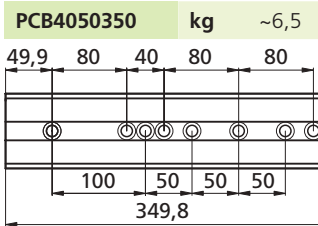
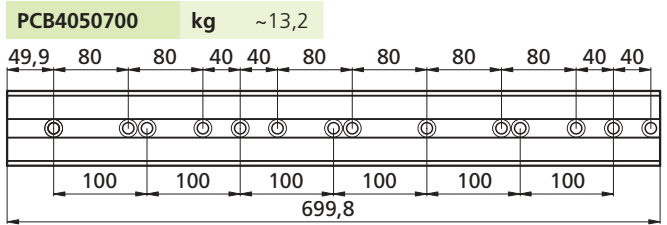
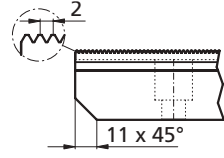
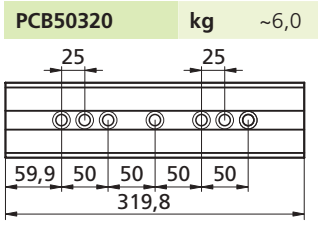
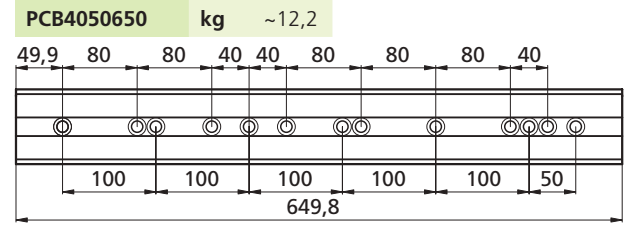
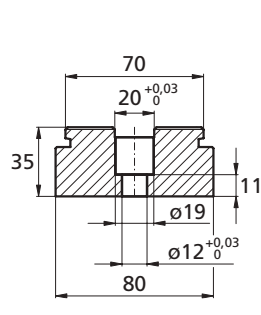
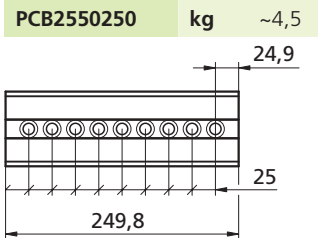
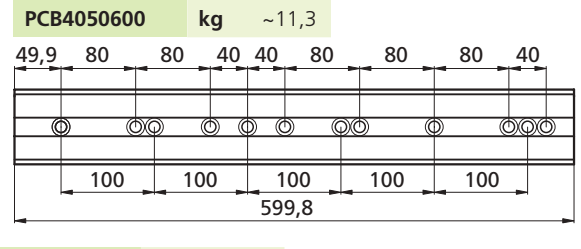
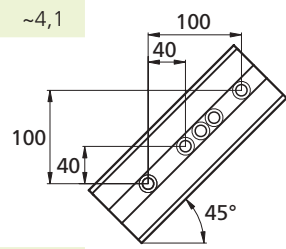
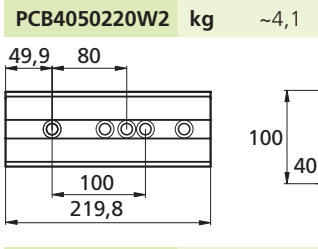
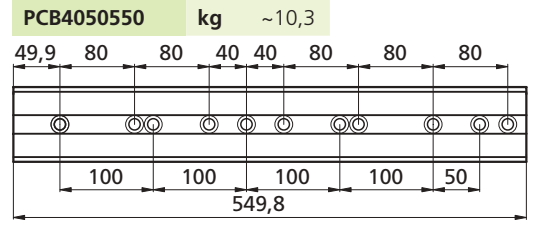
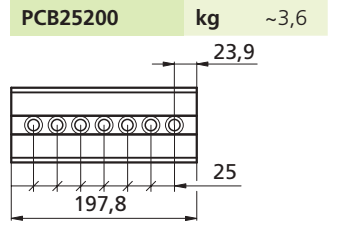
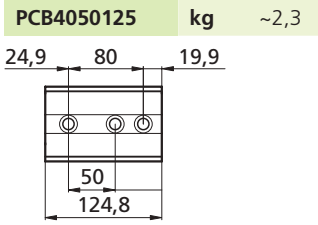
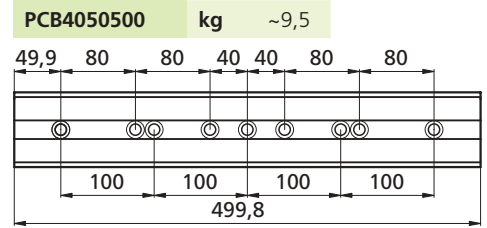
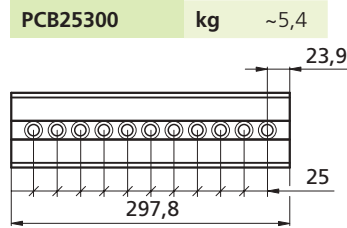
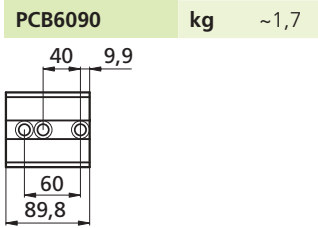
Die Power Clamp-Schiene dient als Basis für über 200 verschiedene Spannmodule, Zentrischspanner, Rohlingsmodule und Vakuumplatten.

The Power Clamp base rail serves as a supporting plate for more than 200 different clamping modules, self centring vises, blank modules and vacuum clamping plates.

Toleranz gilt für alle PCB-Basisschienen / Tolerance applies to all PCB base rails

Toleranzklassen Tolerance classes	
P6	+0.06
P5	+0.05
P4	+0.04
P3	+0.03
P2	+0.02
P1	+0.01
P0	+0.005
M0	-0.005
M1	-0.01
M2	-0.02
M3	-0.03
M4	-0.04
M5	-0.05
M6	-0.06

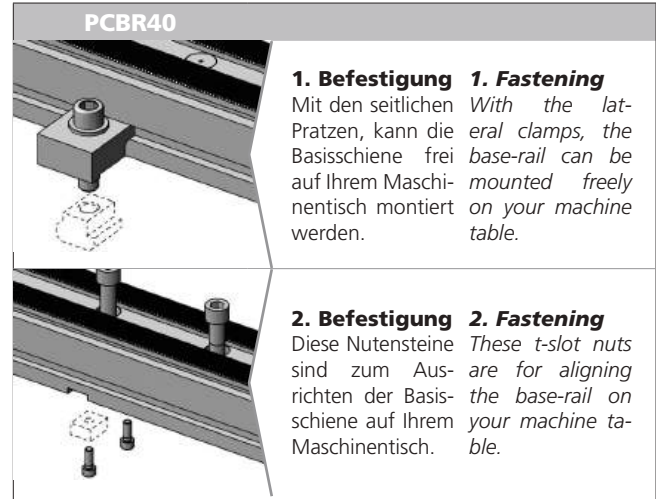
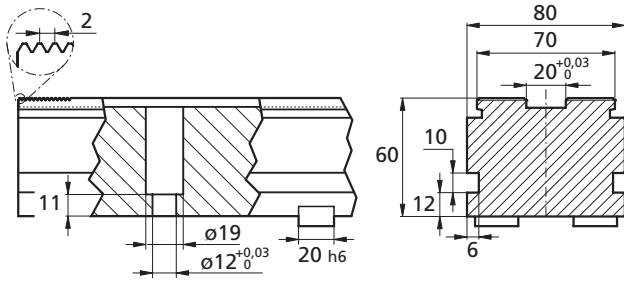




Basisschienen in Zoll
Base rails in inch



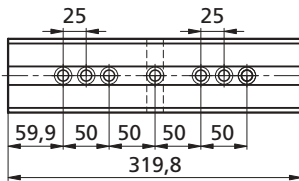
Bestellbeispiel / Ordering example: **PCB4050125**



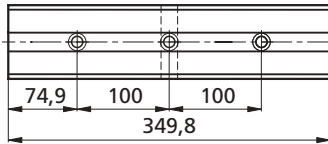
1. Befestigung 1. Fastening
Mit den seitlichen Latratten, kann die Basisschiene frei auf Ihrem Maschinentisch montiert werden.
With the lateral clamps, the base-rail can be mounted freely on your machine table.

2. Befestigung 2. Fastening
Diese Nutensteine sind zum Ausrichten der Basisschiene auf Ihrem Maschinentisch.
These t-slot nuts are for aligning the base-rail on your machine table.

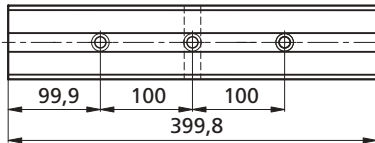
PCB50320H60	
1	1x TF190449
2	2x M6X12ISO4762
3	2x SM1136-20
kg	~10,3



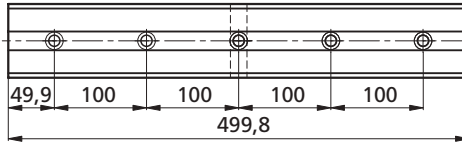
PCB100350H60	
1	1x TH170888
2	2x M6X12ISO4762
3	2x SM1136-20
kg	~11,7



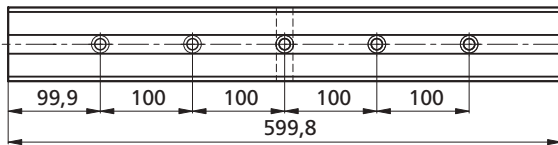
PCB100400H60	
1	1x TB140546
2	2x M6X12ISO4762
3	2x SM1136-20
kg	~13,4



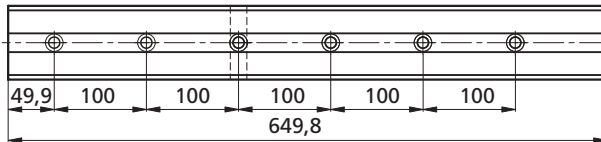
PCB100500H60	
1	1x TB140553
2	2x M6X12ISO4762
3	2x SM1136-20
kg	~16,7



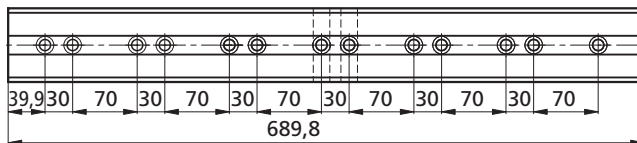
PCB100600H60	
1	1x TB140556
2	2x M6X12ISO4762
3	2x SM1136-20
kg	~20,1



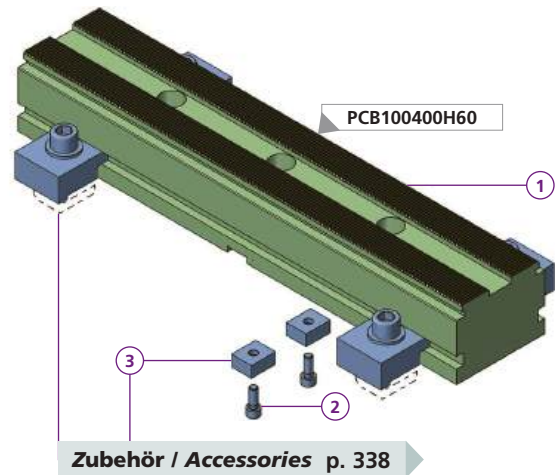
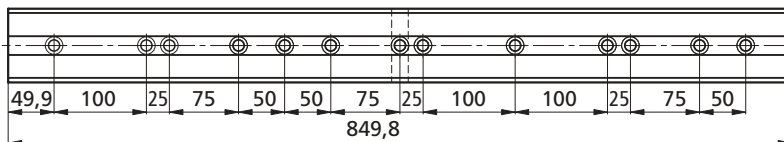
PCB100650H60	
1	1x TB140559
2	2x M6X12ISO4762
3	2x SM1136-20
kg	~21,8



PCB100690H60	
1	1x ZL100122
2	2x M6X12ISO4762
3	2x SM1136-20
kg	~22,6



PCB100850H60	
1	1x TB140562
2	2x M6X12ISO4762
3	2x SM1136-20
kg	~27,9

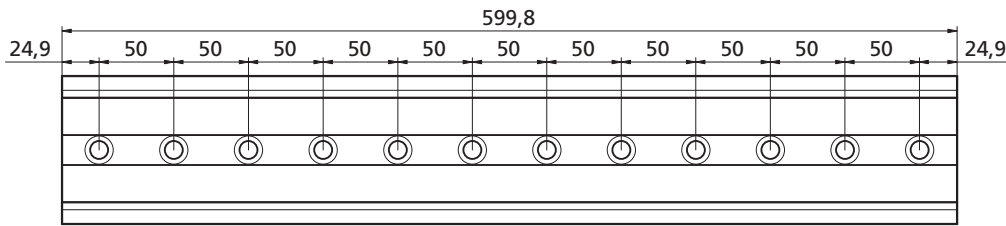


PCBR40	
4	1x M12X45ISO4762
5	1x TN100251
6	1x TK200035
kg	~0,25

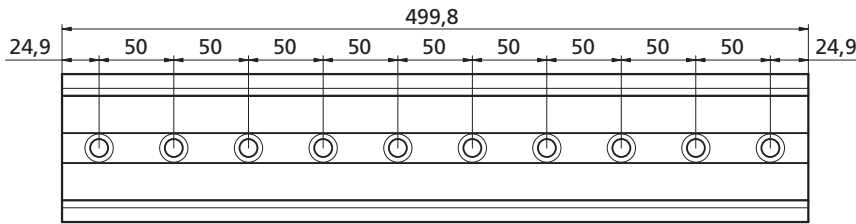
T-Nutensteine T-slot nuts
T-Nutensteine je nach Maschinentisch, muss separat bestellt werden.
T-slot nuts depending on the machine table, must be ordered separately.

Bestellbeispiel / Ordering example: 1x PCB100400H60 & 2x M6X12ISO4762 & 2x SM1136-20

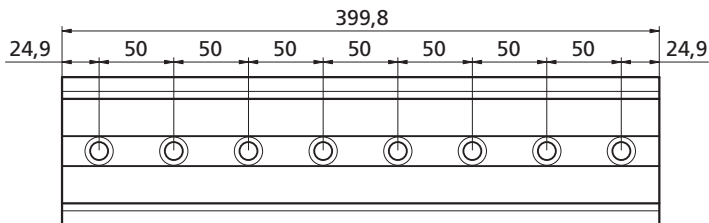
PCMB50600H175 kg ~39



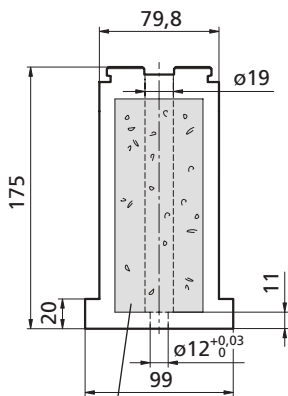
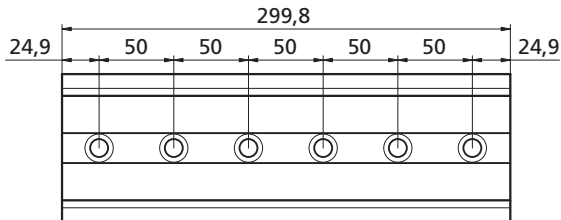
PCMB50500H175 kg ~34



PCMB50400H175 kg ~27



PCMB50300H175 kg ~22



Epoxy Mineral
 Für gute Vibrationsdämpfung
 For brilliant dampening effect

Kupplungsstück (Basisschienen zum koppeln) Coupling element (Base rails for coupling)

powerCLAMP

Kupplungsstücke für PCB Basisschiene auf Mineralgus-Türmen

Mit diesen Kupplungsstücken ist es möglich, die PCB Basisschienen zu verlängern. Aufgrund des durchgängigen Kraftschlusses wird eine übermäßige Belastung des Mineralgussturmes vermieden. Erforderlich ist eine Modifikation der Enden der Basisschienen gemäss der untenstehenden Zeichnung durch den Anwender. Selbstverständlich können neue Schienen bereits mit dieser Modifikation ausgeliefert werden.

So können die zwei Kupplungsstücke montiert werden, die nach dem Platzieren der Schienen eingesetzt und festgezogen werden. Eine zusätzliche Schraube (B) nimmt allfällige, senkrecht zur Befestigungsfläche auftretende Kräfte auf.

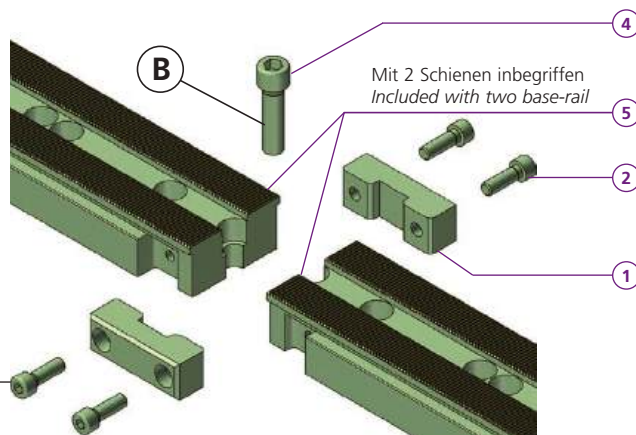
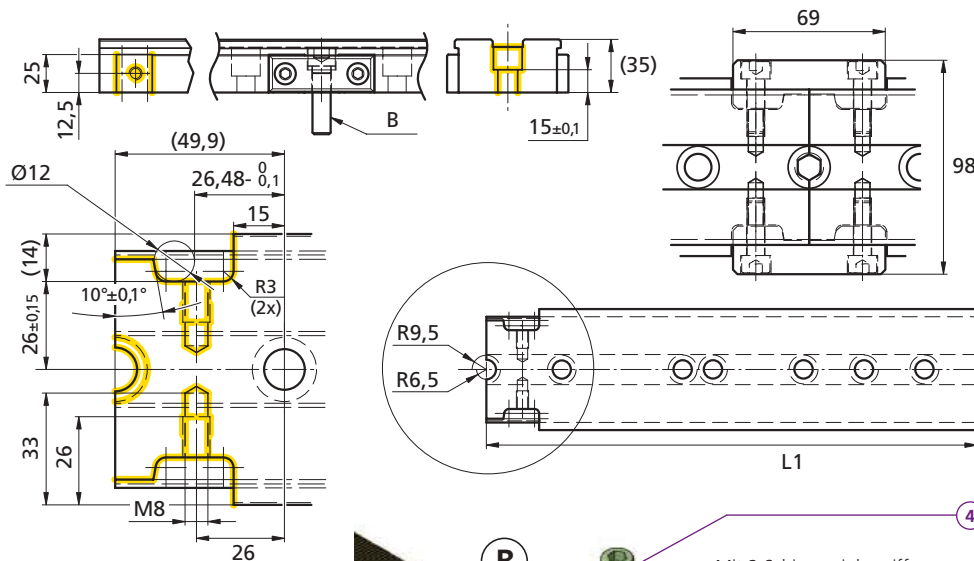
Coupling element for PCB base rails mounted on epoxy mineral tombstones

With this coupling element, it is possible to extend the PCB base rail by a second rail. Due to the frictional connection, the behaviour of the associated items is approximate to the behaviour of a continuous rail. A modification according to the drawing below (made by the customer) is required at the end of the base rails. New base rails can be supplied with this modification.

So the two coupling elements can be placed between the base rails. An additional screw (B) is taken the force flatwise to the seating.

Detailzeichnung zum Bearbeiten aller Basisschienen H35, um die Aussparung für das Kupplungsstück bei vorhandenen Schienen nachträglich herzustellen.

Detail drawing for machining all base rails H35 to retrofit the recess for the coupling piece on existing rails.



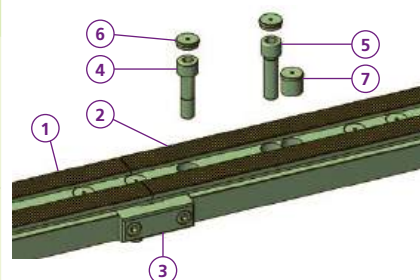
Montageanleitung siehe Video
Assembly instructions see video



PCBP69SET		PCB4050250KP	PCB4050400KP	PCB4050450KP	PCB4050500KP	PCB4050650KP	PCB4050700KP
1	2x TW090078	5	5	5	5	5	5
2	4x M8X25ISO4762	L1 = 250	L1 = 400	L1 = 450	L1 = 500	L1 = 650	L1 = 700
4	1x M12X45ISO4762	kg ~5,1	kg ~7,9	kg ~8,9	kg ~9,9	kg ~12,8	kg ~13,8
kg	~0,4						

Bestellbeispiel / Ordering example: PCB4050250KP

PCB850SET	PCB900SET	PCB950SET	PCB1000SET
1	1x PCB4050400KP	1	2x PCB4050500KP
2	1x PCB4050450KP	2	1x PCB4050250KP
3	1x PCBP69SET	3	1x PCBP69SET
4	4x TWPAS1240	4	4x TWPAS1240
5	5x M12X40ISO4762	5	6x M12X40ISO4762
6	9x PCPF16L6	6	10x PCPF16L6
7	9x PCPF16L18	7	8x PCPF16L18
kg	~17,1	kg	~19,1
		kg	~20,2

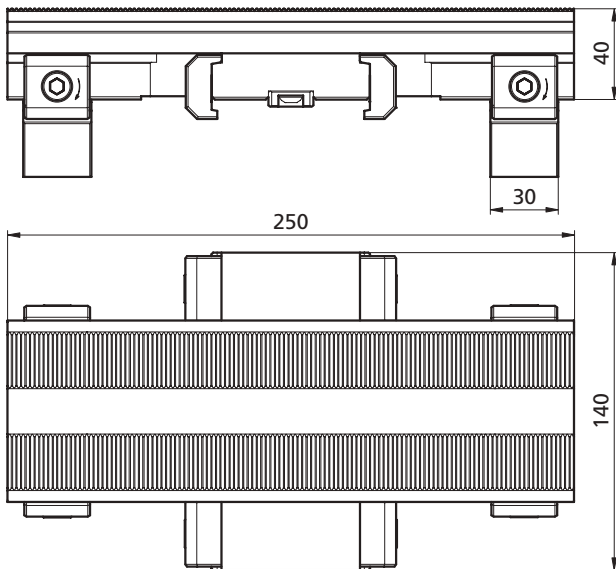
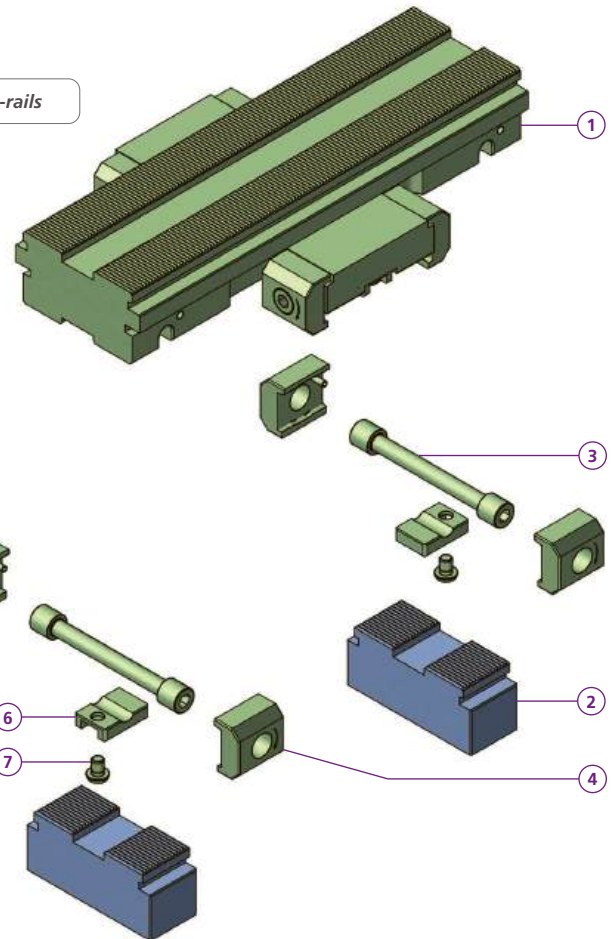
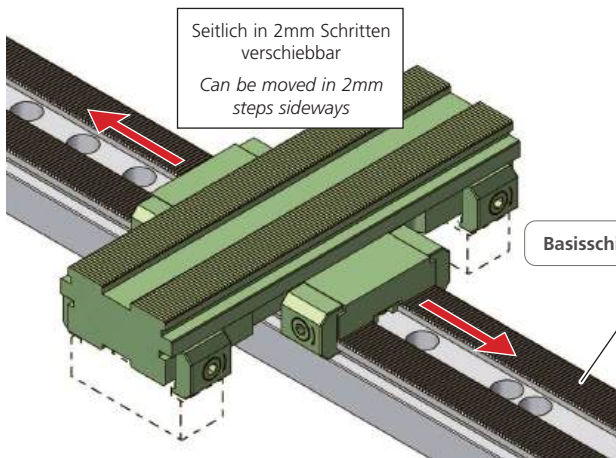
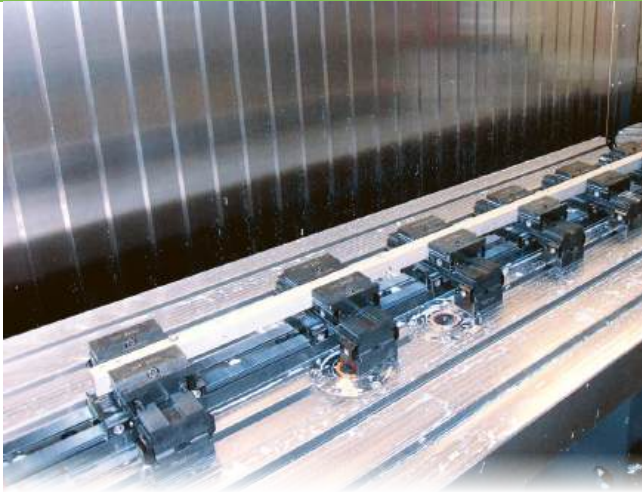


Bestellbeispiel / Ordering example: PCB850SET

Querschiene 90° Crossbar 90°

PCB250Q90-H35

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PCB250Q90H35	
①	1x TH151032
②	2x —
③	4x PCS14
④	4x PCSP30L
⑤	4x PCSP30R
⑥	4x PCGU2030
⑦	1x M6X8ISO7380
kg	~8,18

Schienenhöhe / Rail height

AS35 (H = 35)	AS60 (H = 60)	AS80 (H = 80)

Seitliche Stützen

Bei Gebrauch der Querschiene 90°, werden je nach Höhe der Basisschiene auf dessen sie aufgesetzt sind, zwei seitliche Stützen AS35 / AS60 / AS80 unterlegt.

Side support

When using the cross rail 90°, a side support AS35 / AS60 / AS80 is underlaid, depending on the height of the base rail on which it is placed.

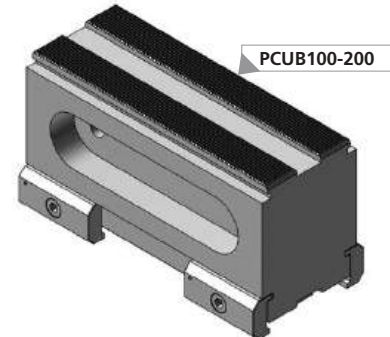
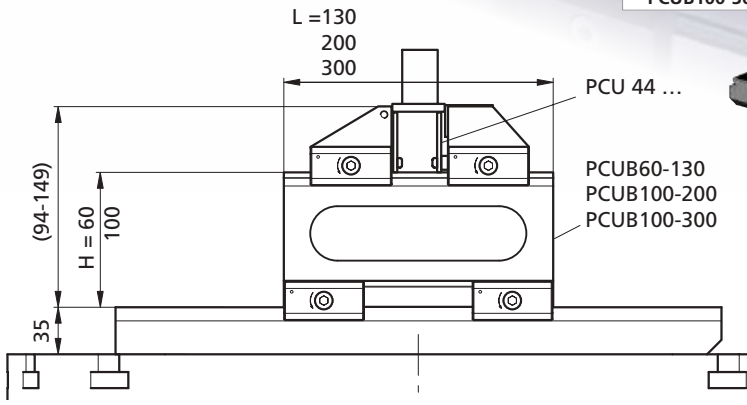
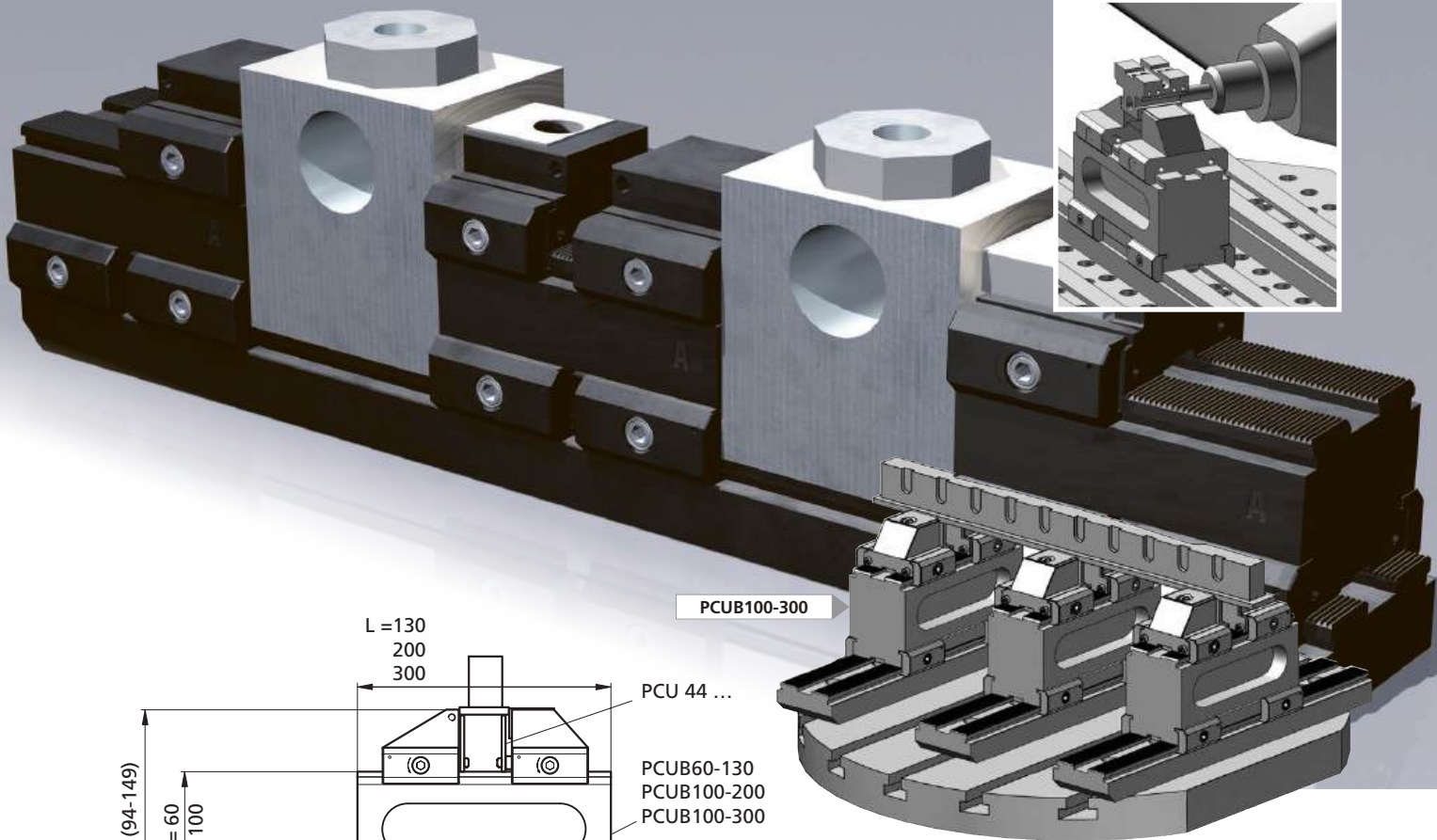
Bestellbeispiel / Ordering example: PCB250Q90H35

Separat bestellen / Order separately

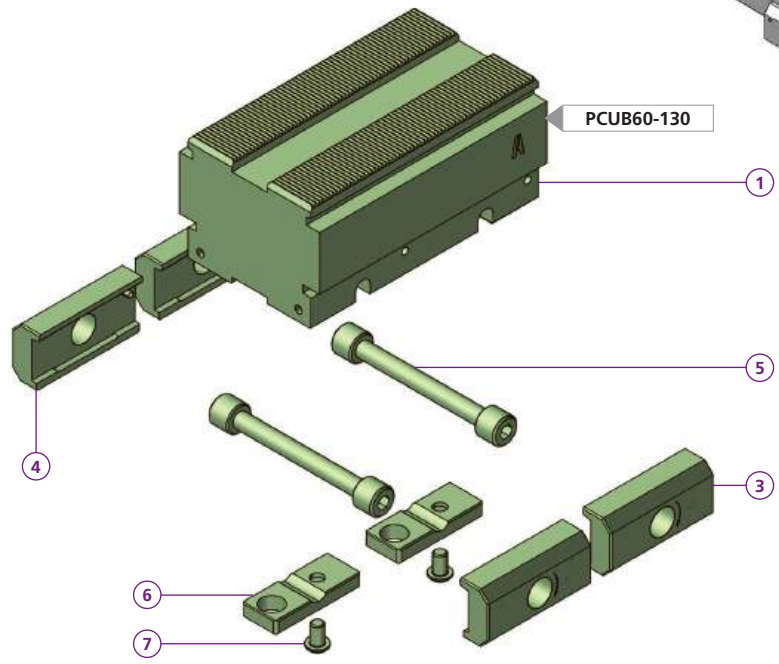
Erhöhung für 5-Achsenmaschinen Riser for 5-axis machines

PCUB60-130
PCUB100-200
PCUB100-300

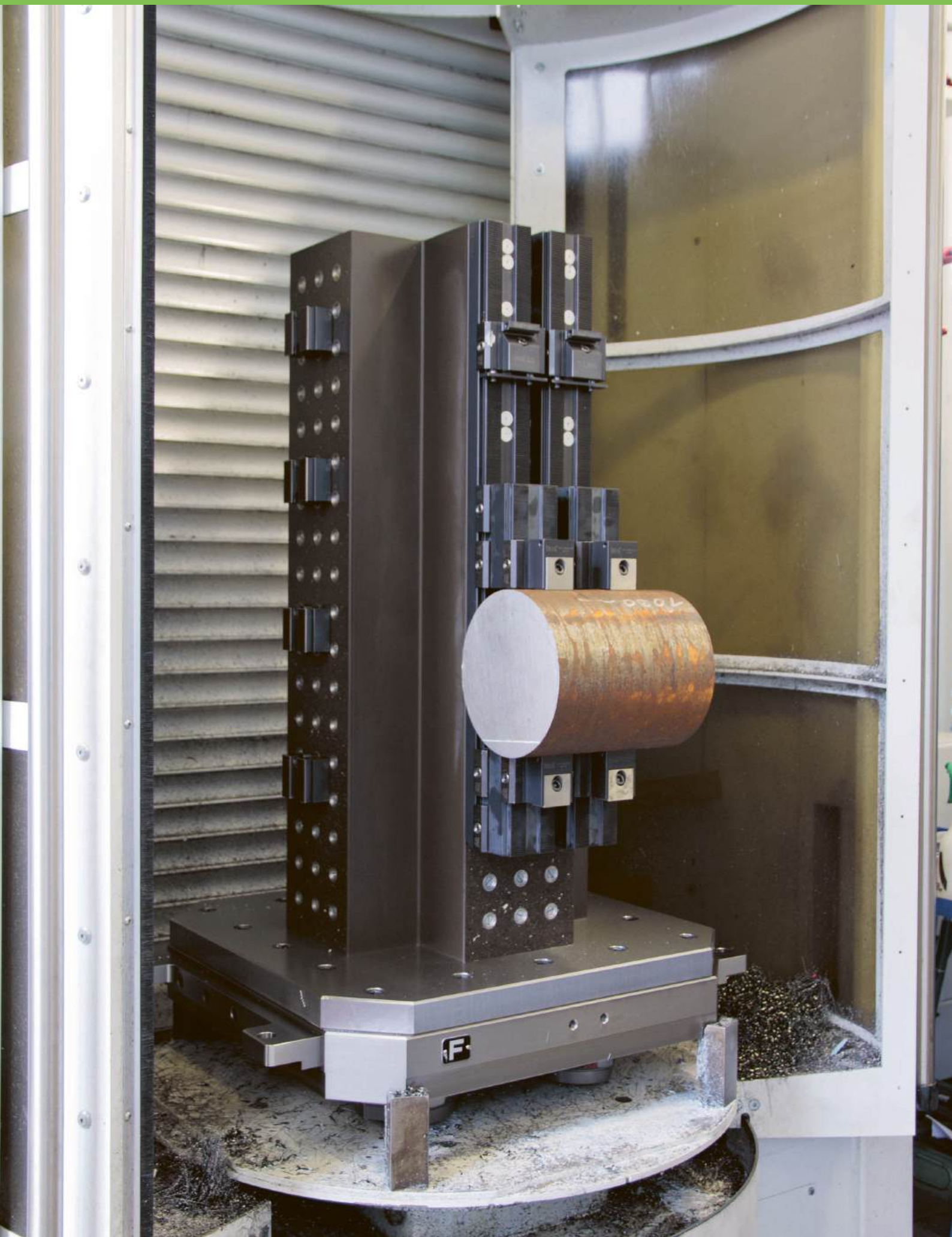
powerCLAMP



- | PCUB60-130 | |
|-------------|----------------|
| ① | 1x TK120596 |
| ③ | 2x PCSP60R |
| ④ | 2x PCSP60L |
| ⑤ | 2x PCS14 |
| ⑥ | 2x PCGU2049 |
| ⑦ | 2x M6X8ISO7380 |
| L | = 130 |
| H | = 60 |
| kg | ~5,8 |
| PCUB100-200 | |
| ① | 1x TK130108 |
| L | = 200 |
| H | = 100 |
| kg | ~10,5 |
| PCUB100-300 | |
| ① | 1x TK130109 |
| ③ | 3x PCSP60R |
| ④ | 3x PCSP60L |
| ⑤ | 3x PCS14 |
| ⑥ | 3x PCGU2049 |
| ⑦ | 3x M6X8ISO7380 |
| L | = 300 |
| H | = 100 |
| kg | ~16 |



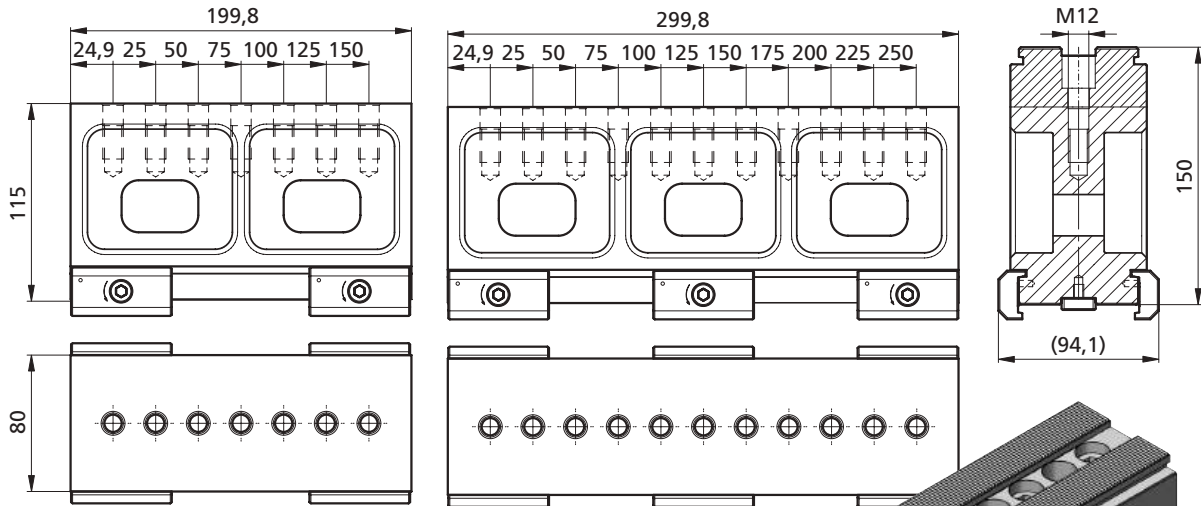
Bestellbeispiel / Ordering example: PCUB100-200



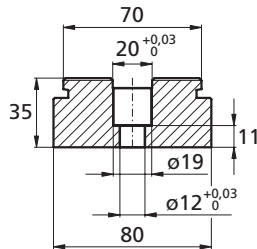
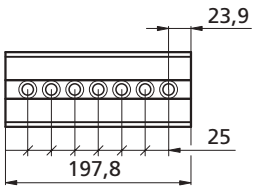
PCUB115-200-R25

PCUB115-300-R25

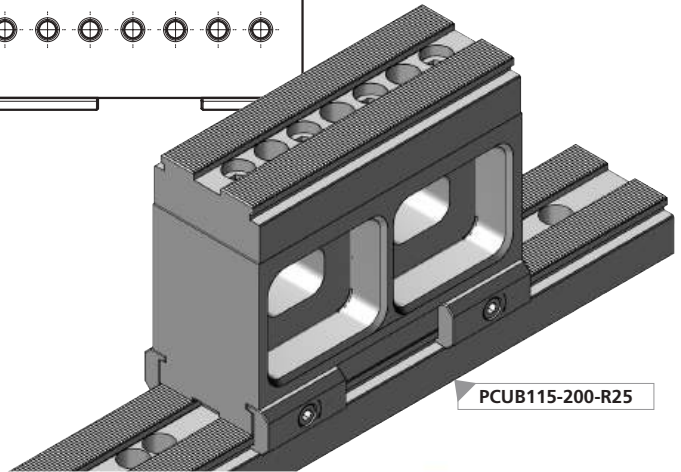
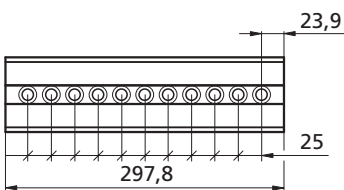
powerCLAMP



PCB25200 kg ~3,6



PCB25300 kg ~5,4



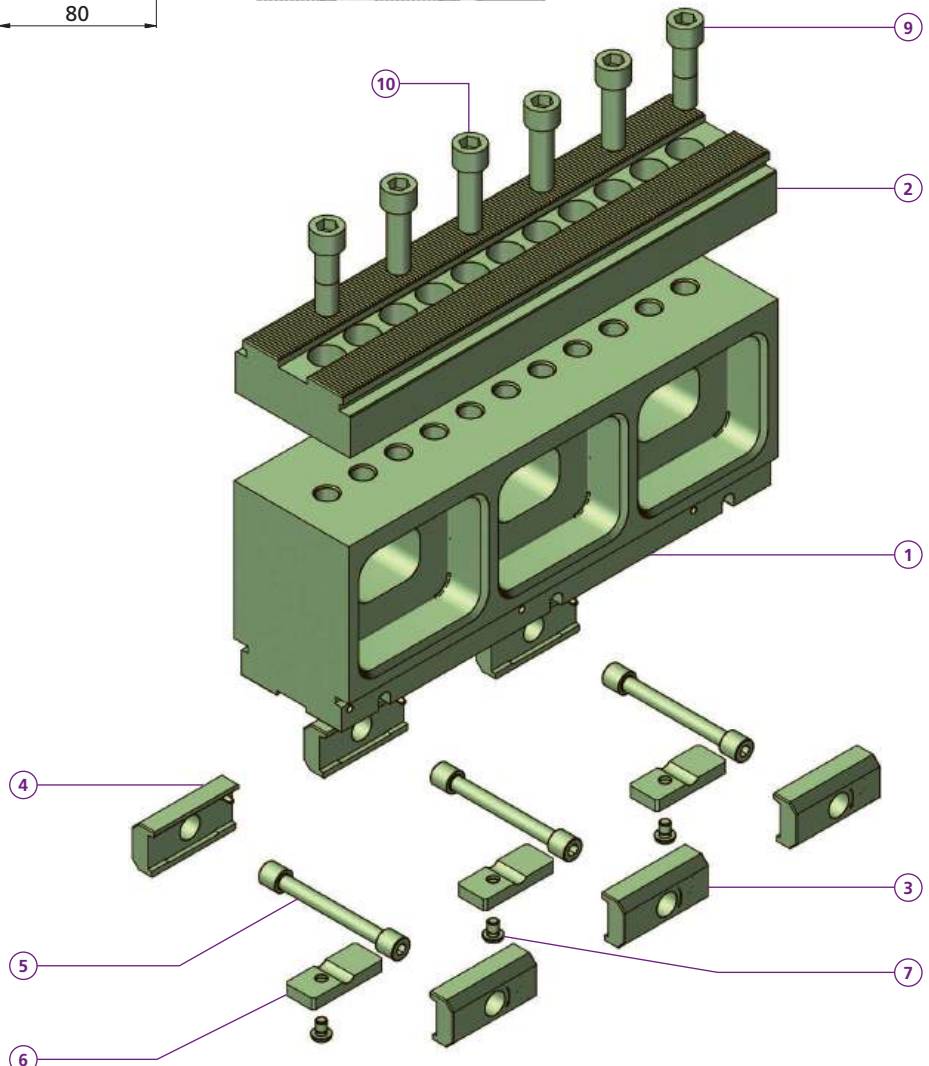
PCUB115-200-R25

PCUB115-200-R25

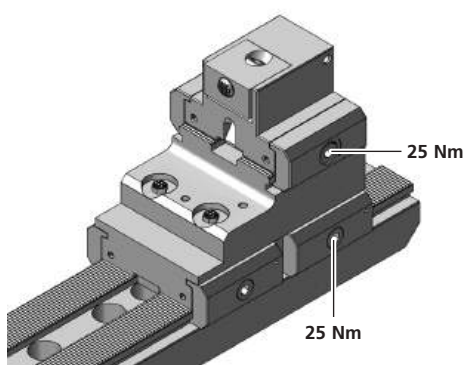
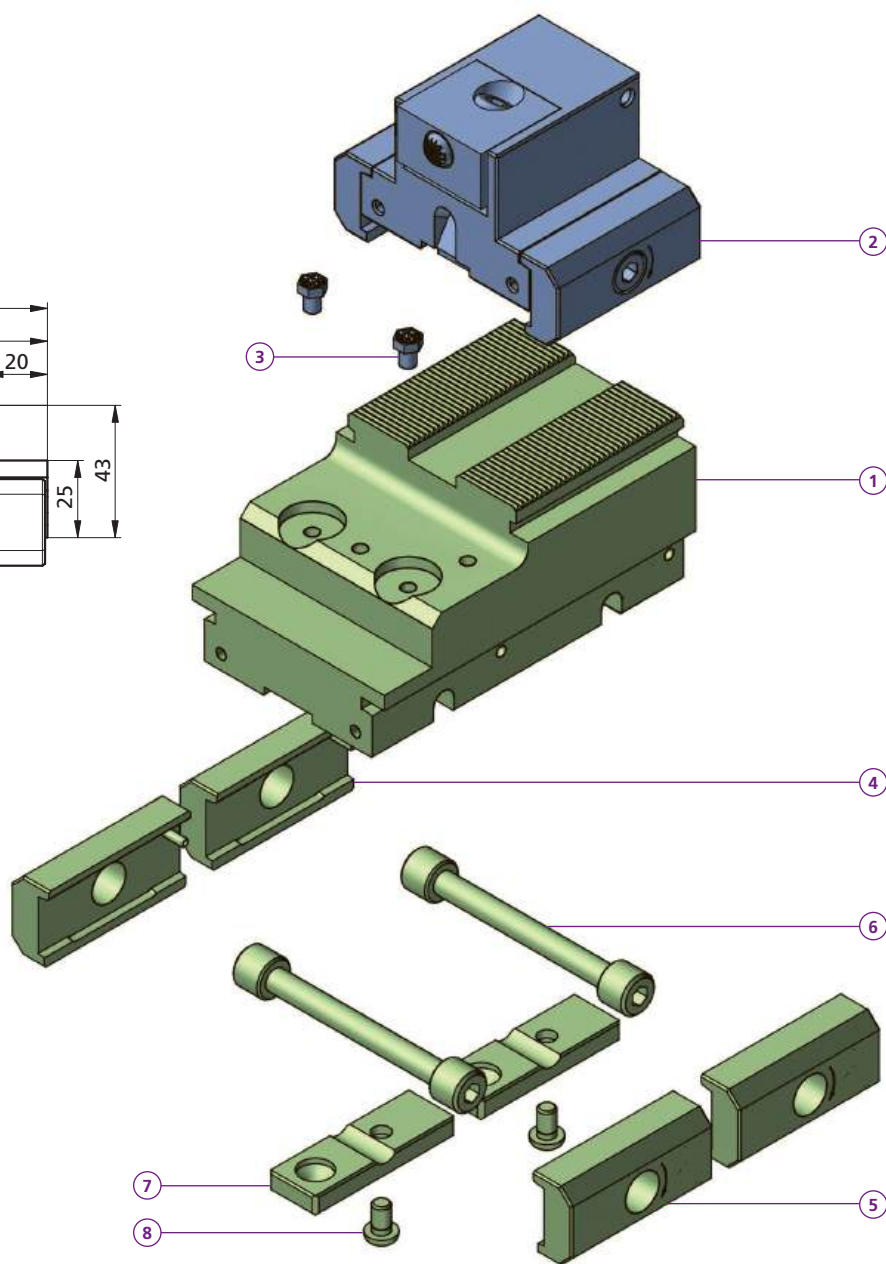
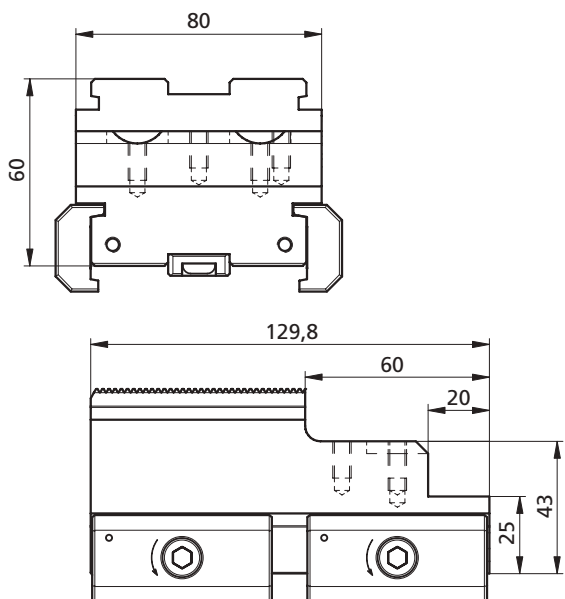
- 1 1x TK130323
 - 2 1x PCB25200
 - 3 2x PCSP60R
 - 4 2x PCSP60L
 - 5 2x PCS14
 - 6 2x PCGU2049
 - 7 2x M6X8ISO7380
 - 9 2x TWPAS1240
 - 10 2x M12X40ISO4762
- kg ~13

PCUB115-300-R25

- 1 1x TK130324
 - 2 1x PCB25300
 - 3 3x PCSP60R
 - 4 3x PCSP60L
 - 5 3x PCS14
 - 6 3x PCGU2049
 - 7 3x M6X8ISO7380
 - 9 2x TWPAS1240
 - 10 4x M12X40ISO4762
- kg ~19,6



Bestellbeispiel / Ordering example: **PCUB115-300-R25**



PCUB60-70-130	
①	1x TK130707
②	1x PS1F43N49-60
③	2x CCHMR
④	2x PCSP60L
⑤	2x PCSP60R
⑥	2x PCS14
⑦	2x PCGU2049
⑧	2x M6X8ISO7380
kg	~4,3

p. 64

Zubehör / Accessories p. 337

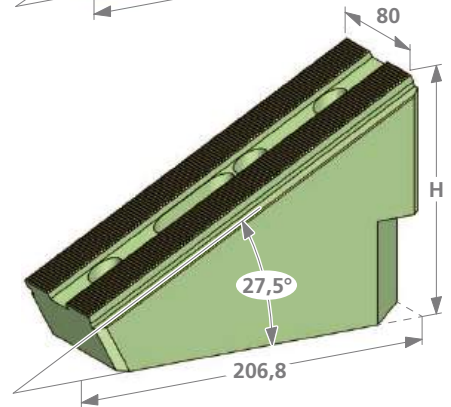
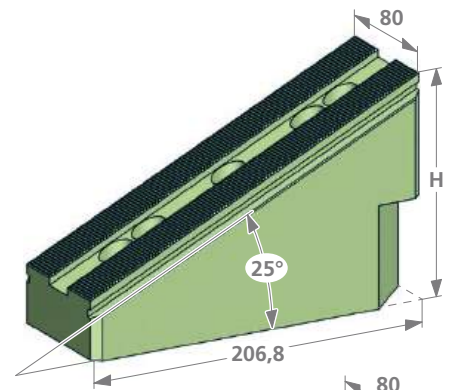
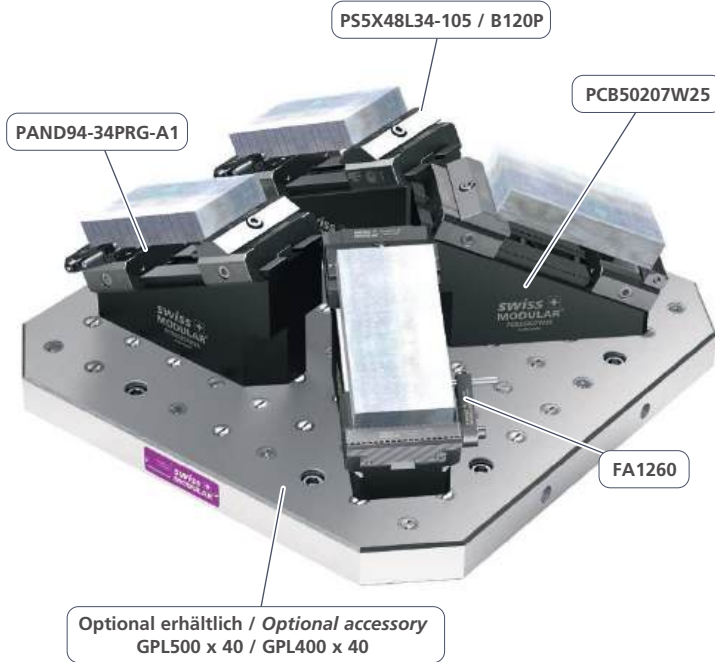
Bestellbeispiel / Ordering example: PCUB60-70-130

Separat bestellen / Order separately

Schräge Basisschiene für 5-Achsenmaschinen Slanted base rail for 5-axis machines

5axes
powerCLAMP

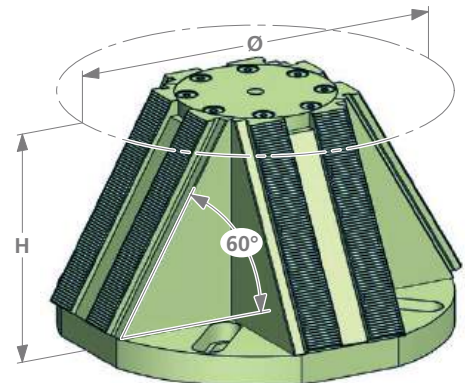
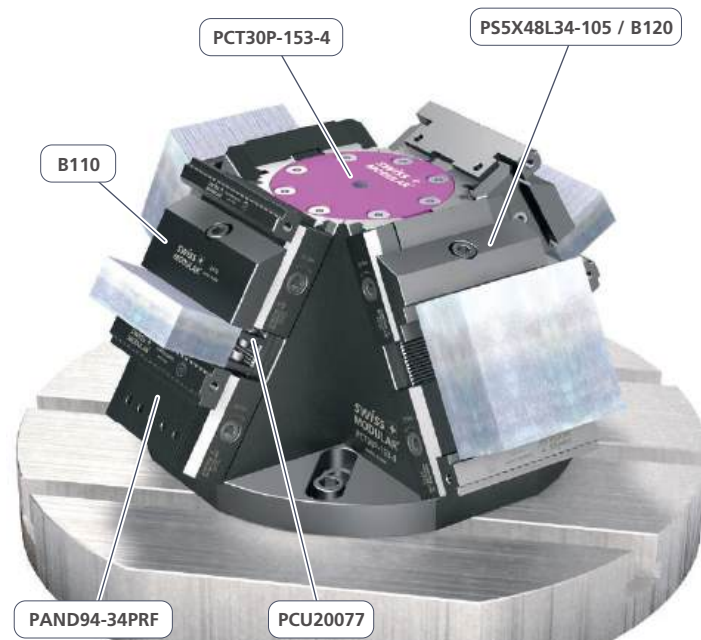
Art. Nr.	kg	Δ	H
PCB50207W25	~9,2	25°	131,5
PCB50207W27	~9,5	27,5°	139,7



Die Basisschienen können auf einem 50 mm Raster je nach Bedarf parallel oder diagonal platziert werden.

The base rails can be placed on a 50 mm grid either parallel or diagonal as required.

Art. Nr.	kg	Δ	\emptyset	H
PCT30P-153-4	~24	60°	266	152,4



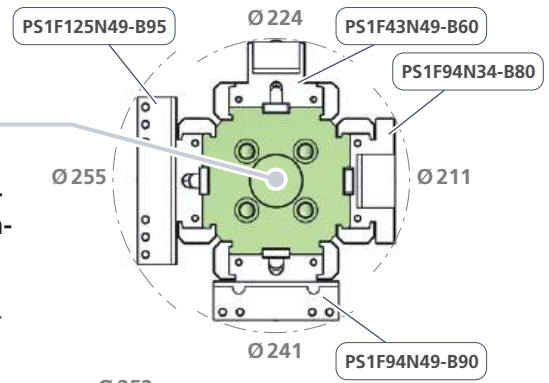
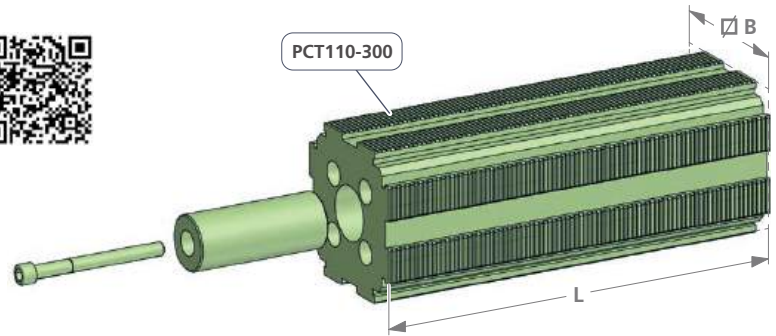
Die Stahl-Mineralgusspyramide verfügt über eine powerCLAMP Schnittstelle und ermöglicht eine kompakte und zugleich flexible 5-Achs-Bearbeitung. Die Module werden in einem Winkel von 60° montiert. Dank dem eingesetzten Mineralguss, hat die Konstruktion ein relativ tiefes Gewicht bei einer hohen Festigkeit.

The steel mineral casting pyramid has a powerCLAMP interface and enables compact and, at the same time, flexible 5-axis machining. The modules are mounted at an angle of 60°. Due to the mineral cast used, the construction has a relatively low weight with a high rigidity.

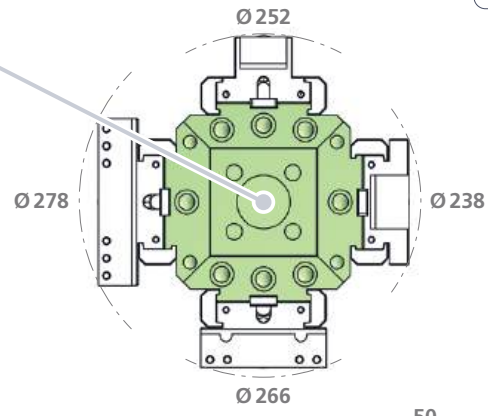
Monobloc Balken & Gegenlager zu Teilapparat Monobloc & Counterbearing for 4th-axis

powerCLAMP

Art. Nr.	kg	L	B
PCT110-300	~24,5	300	110x110
PCT110-350	~27,5	350	110x110
PCT110-400	~31,5	400	110x110
PCT110-450	~35,5	450	110x110
PCT110-500	~39,5	500	110x110
PCT110-550	~43,0	550	110x110
PCT110-600	~47,0	600	110x110
PCT110-650	~51,0	650	110x110
PCT110-700	~55,2	700	110x110



Störkreise bei verschiedenen Spannmodulen
Workpiece diameter with different clamping modules

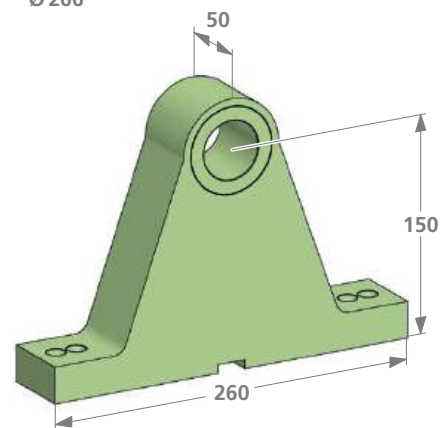


Stahl-Mineralguss Steel-exoxy mineral

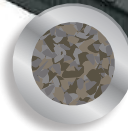
Art. Nr.	kg	L	B
PCMT150-700	~83,0	700	150x150
PCMT150-750	~89,0	750	150x150
PCMT150-800	~95,0	800	150x150
PCMT150-850	~101,0	850	150x150

Gegenlager Counterbearing

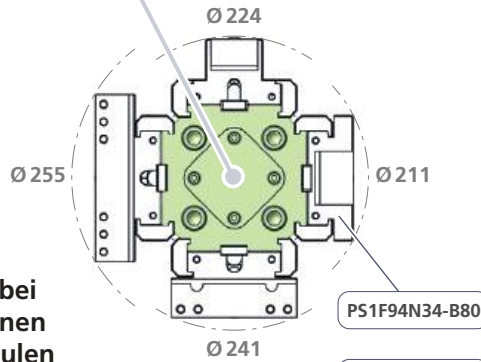
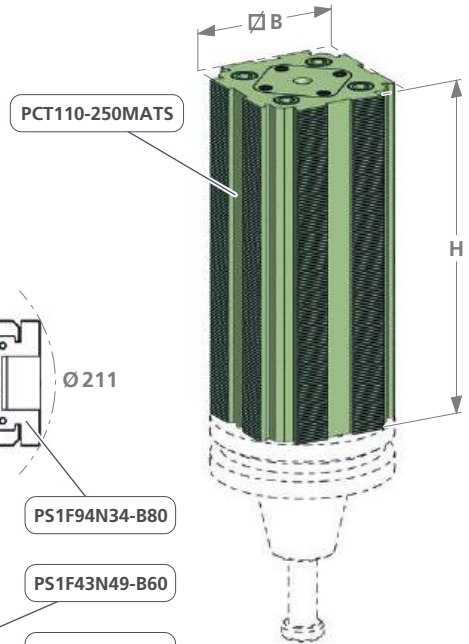
Art. Nr.	kg
PCGL15050	~8,0



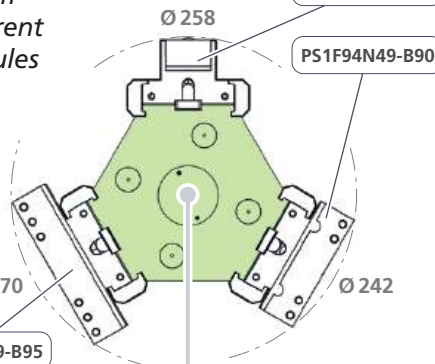
Reduziert Vibrationen und ist leicht
Reduces vibrations and is light



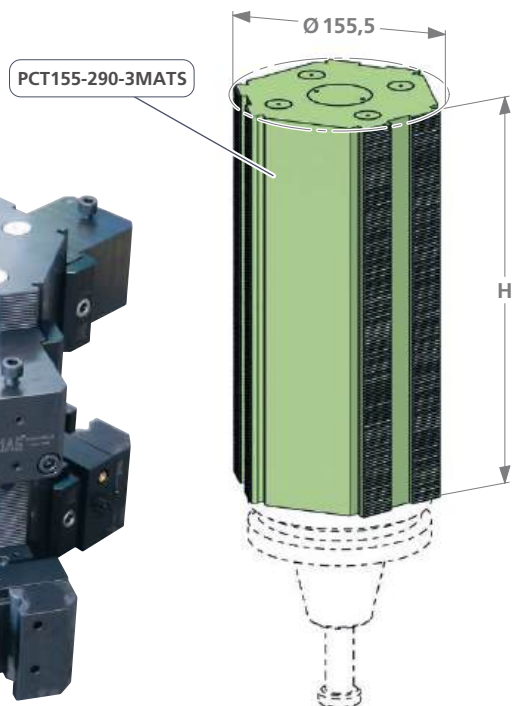
Art. Nr.	kg	H	B
PCT110-250MATS	~17	250	110x110
PCT110-300MATS	~21	300	110x110



Störkreise bei verschiedenen Spannmodulen
Workpiece diameter with different clamping modules



Art. Nr.	kg	H
PCT155-290-3MATS	~30	290



Spanntürme zu 5-Achs Bearbeitungszentren Clamping fixtures for 5 axis machines

powerCLAMP



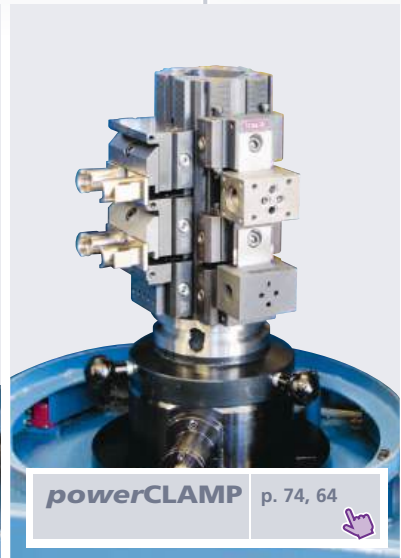
powerCLAMP p. 81



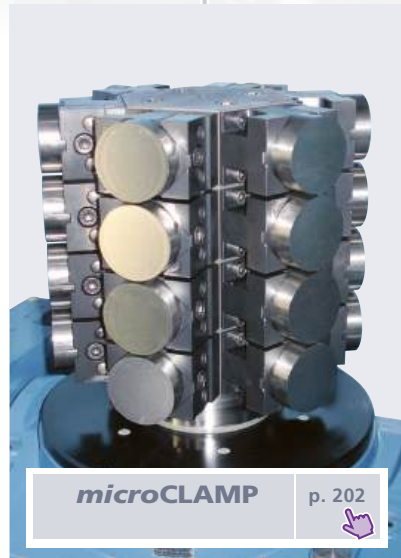
microCLAMP p. 178



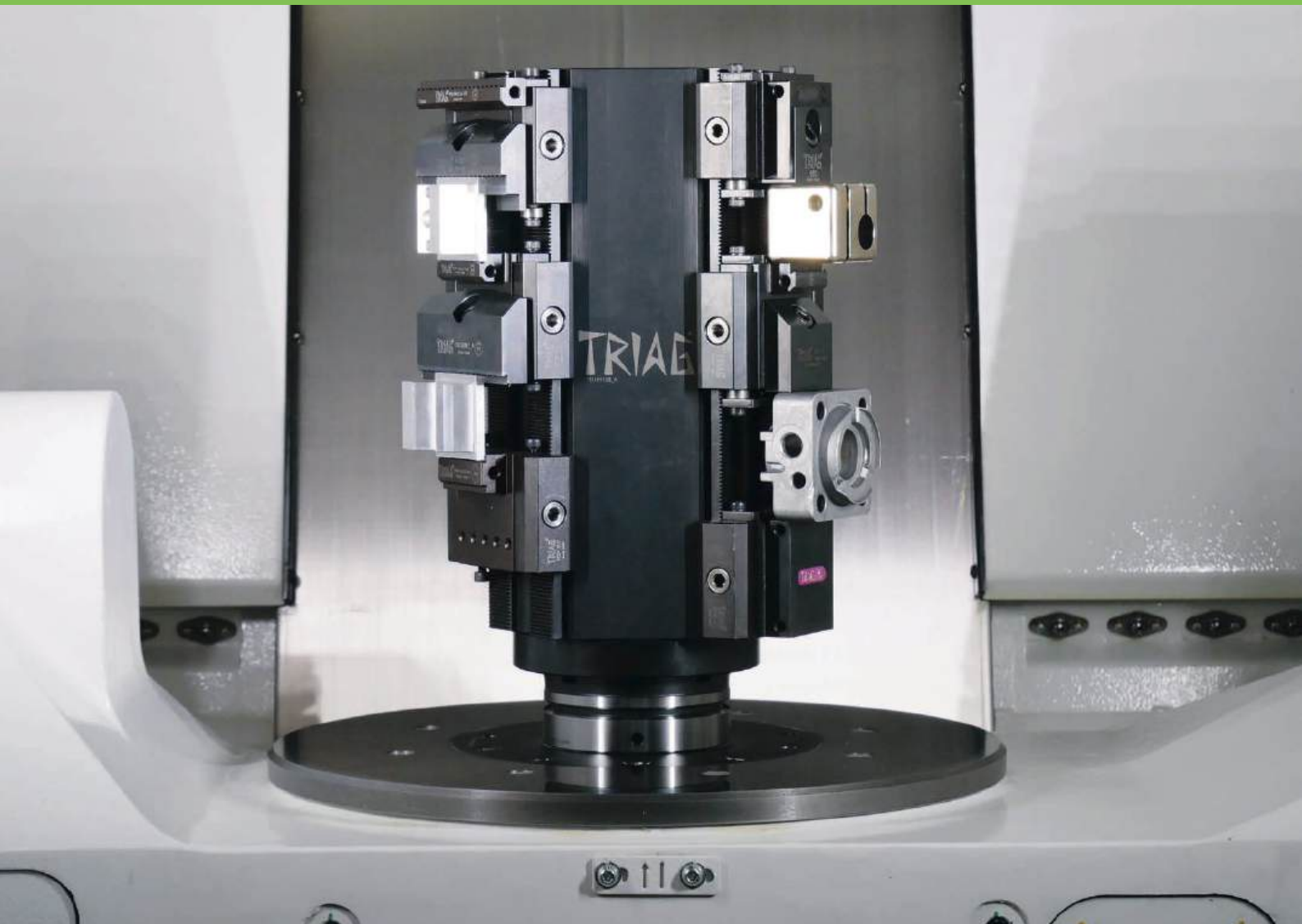
triCENTRO p. 126

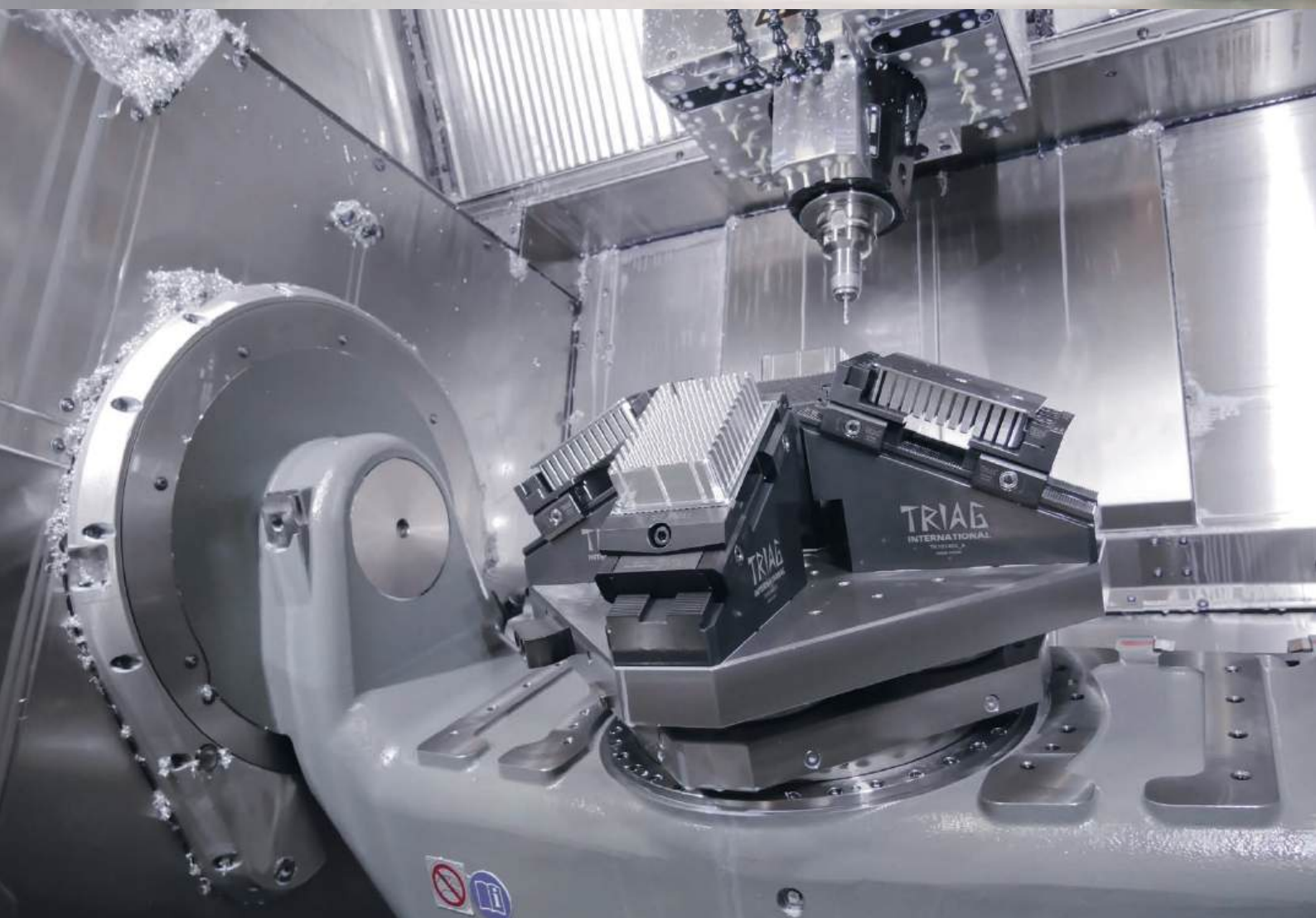
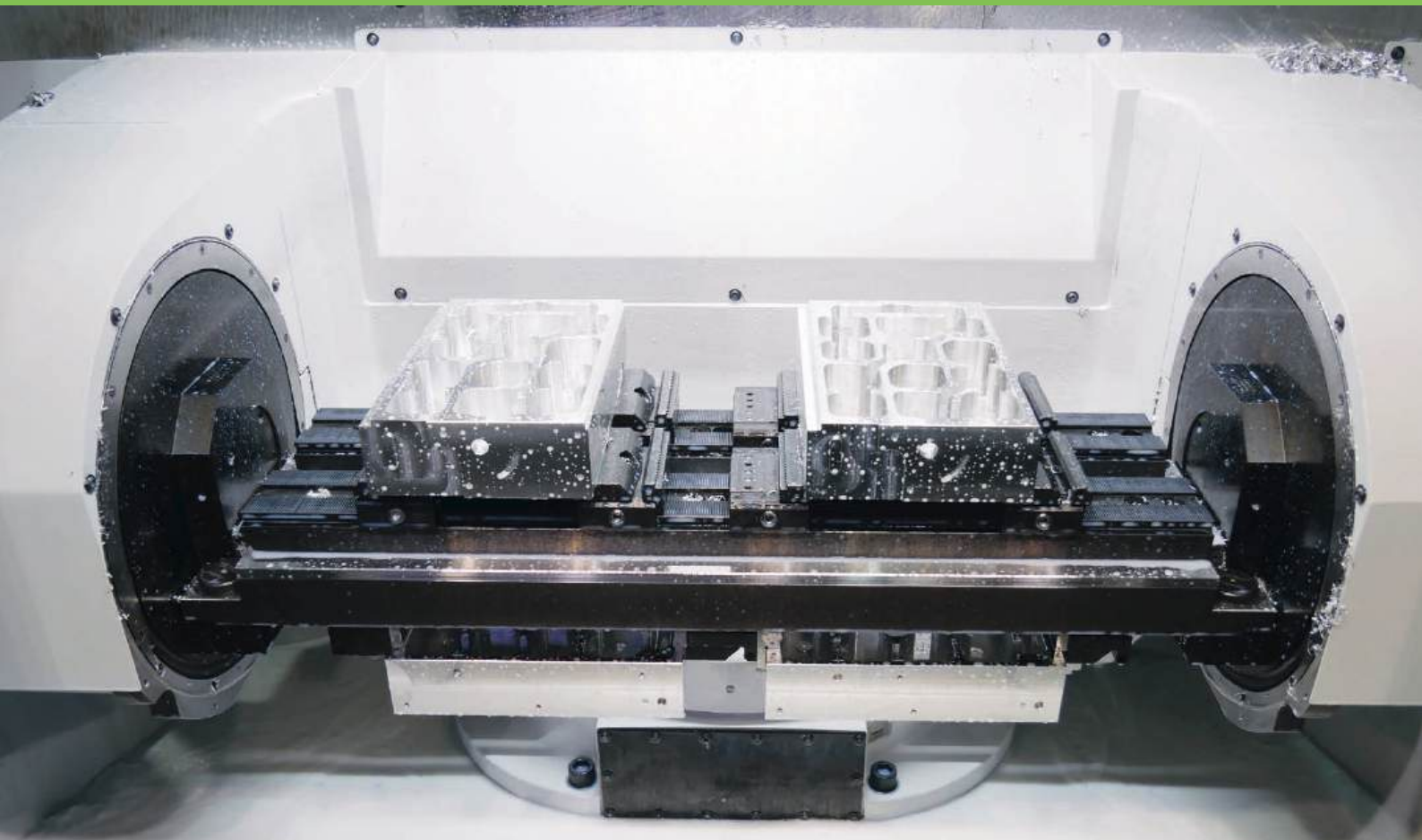


powerCLAMP p. 74, 64



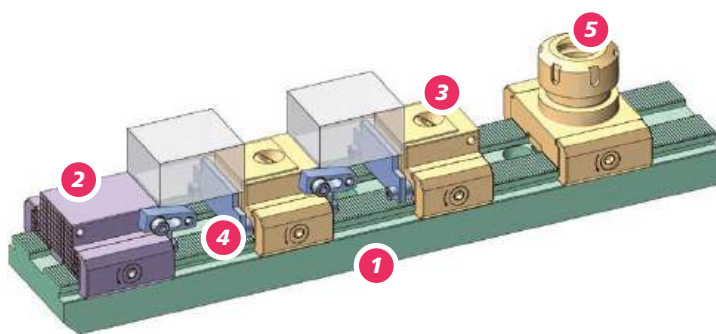
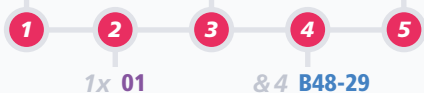
microCLAMP p. 202





BESTELLBEISPIEL / ORDERING EXAMPLE

1x PCSET18-450A 2x PCSET18-N3 1x PS1X50N62-ER32



Zu jeder Basisschiene gehört 1 Anschlagmodul «Tabelle 2» nach Ihrer Wahl!
Each base rail comes with 1 end module "table 2" of your choice!

1 Basisschienen / Base-rails				
PCSET18-250A	PCB2550250	PCSET18-600A	PCB4050600	
PCSET18-350A	PCB4050350	PCSET18-650A	PCB4050650	
PCSET18-400A	PCB4050400	PCSET18-700A	PCB4050700	
PCSET18-450A	PCB4050450	PCSET18-750A	PCB4050750	
PCSET18-500A	PCB4050500	PCSET18-800A	PCB4050800	
PCSET18-550A	PCB4050550			
PCSET18-320B	PCB50320H60			
PCSET18-400B	PCB100400H60			
PCSET18-500B	PCB100500H60			
PCSET18-600B	PCB100600H60			
PCSET18-650B	PCB100650H60			
PCSET18-690B	PCB100690H60			
PCSET18-850B	PCB100850H60			

2 Anschlagmodule / End modules					
48		78		94	
PAND 48-34	PAND 48-49	PAND 78-34	PAND 78-49	PAND 94-34	PAND 94-49
01	02	05	06	07	08
PAND 48-34 PRF-A1	PAND 48-49 PRF-A1	<ul style="list-style-type: none"> F = glatt / flat R = geriffelt / double serrated ☉ = Direktprägebacken / Direct stamping 		PAND 94-34 PRF-A1	PAND 94-49 PRF-A1
03	04			09	10

5 Dreibackenfutter Spannzangenmodul Mini-Zentrischspanner Three-jaw chuck Collet module Mini-self centering vise					
PS3X125L87BSET	PS3X100L82BSET	PS3X80L75BSET	PS1X50N62-ER32	PCZ80L40PRG62	PCZ100L50

3 Niederzugspanmodule / Pull down clamp modules

48		78		94	
PS1 R48N34 B80N 	PS1 R48N49 B80N 	PS1 R78N49 B90R78 	PS1 F78N49 B90F78 	PS1 R94N49 B90 	PS1 F94N49 B90
PCSET18-N1	PCSET18-N2	PCSET18-N5	PCSET18-N6	PCSET18-N7	PCSET18-N8
PS1 F48N34 B80N 	PS1 F48N49 B80N 	F = glatt / flat R = geriffelt / double serrated = Direktprägebacken / Direct stamping		PS1 R94N49 B93 	
PCSET18-N3	PCSET18-N4			PCSET18-N9	

Linearspanmodule / Linear clamp modules

PS1 PF 48L34 B115P 	PS1 PF 48L49 B115P 	PS1 R78L34 B141 	PS1 F78L34 B140 	PS1 PF 94L34 B120P 	PS1 PF 94L49 B120P
PCSET18-L1	PCSET18-L2	PCSET18-L5	PCSET18-L6	PCSET18-L9	PCSET18-L11
PS1 R48L49 B106 	PS1 F48L49 B105 	PS1 R78L49 B141 	PS1 F78L49 B140 	PS1 R94L34 B111 	PS1 F94L34 B110
PCSET18-L3	PCSET18-L4	PCSET18-L7	PCSET18-L8	PCSET18-L12	PCSET18-L13
PS1 R48L34 B106 	PS1 F48L34 B105 	Bei jedem Niederzug und Linear Spanmodule sind 2 Parallelunterlagen nach Ihrer Wahl und 1 Fräsanschlag enthalten. 		PS1 R94L49 B111 	PS1 F94L49 B110
PCSET18-L16	PCSET18-L17			PCSET18-L14	PCSET18-L15

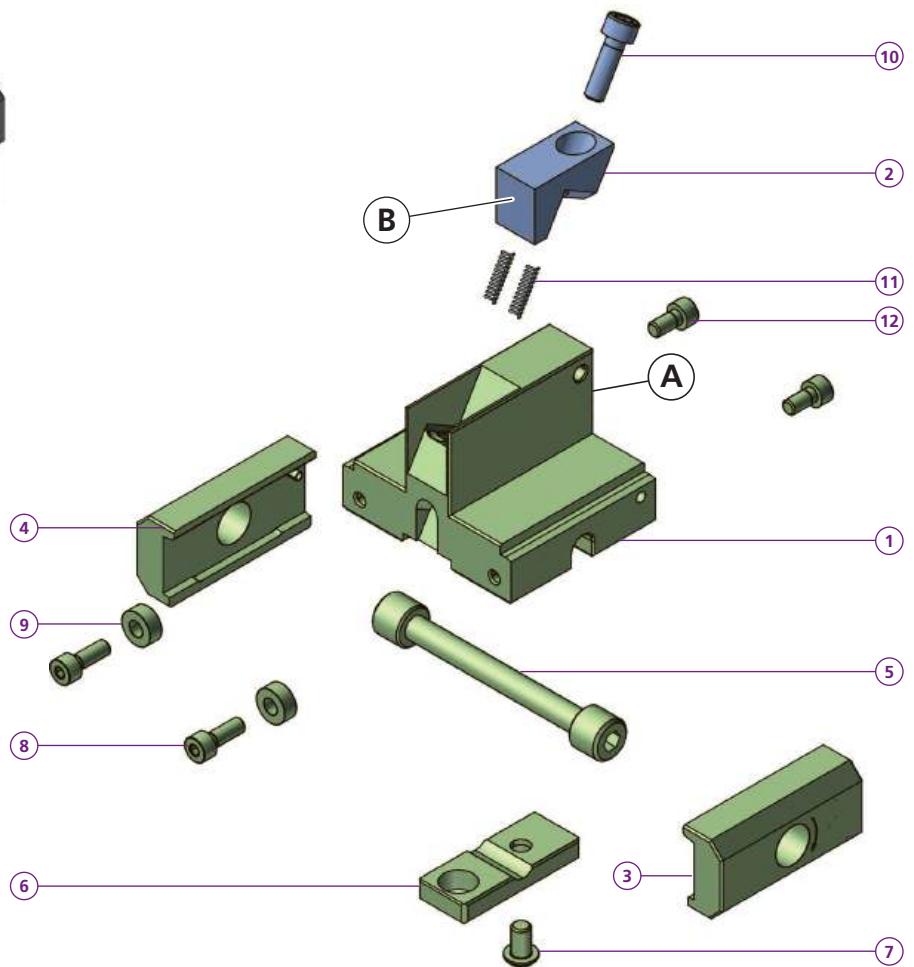
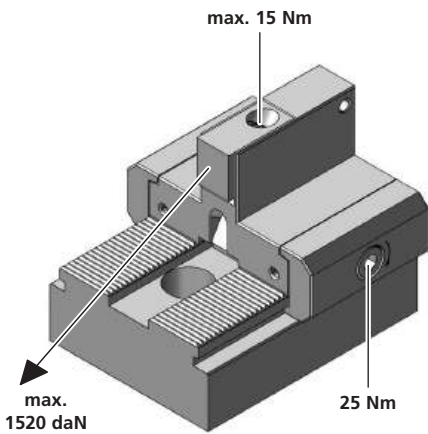
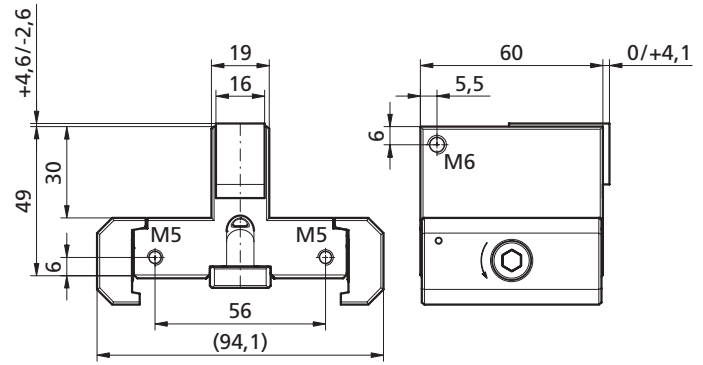
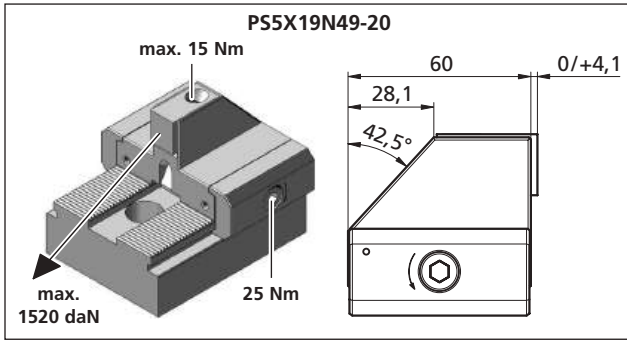
Each pull-down and linear clamping module includes 2 parallels of your choice and 1 milling buffer.

4 Parallelunterlagen / Steel parallels

48	78	94
PCU29047 B48- ...	PCU39077 B78- ...	PCU29093 B94- ...
H PCU 20 047 PCU 24 047 PCU29047 PCU 31 047 PCU 34 047 PCU 39 047 PCU 44 047 PCU 46 047	H PCU 20 077 PCU 24 077 PCU 29 077 PCU 31 077 PCU 34 077 PCU39077 PCU 44 077 PCU 46 077	H PCU 14 093 PCU 20 093 PCU 24 093 PCU29093 PCU 31 093 PCU 34 093 PCU 39 093 PCU 44 093 PCU 46 093 PCU 47 093

Fräsanschlag / Milling buffer 1 x Inklusive / Included

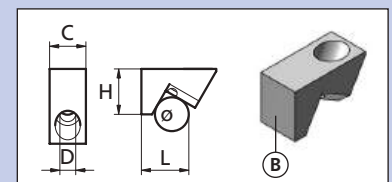




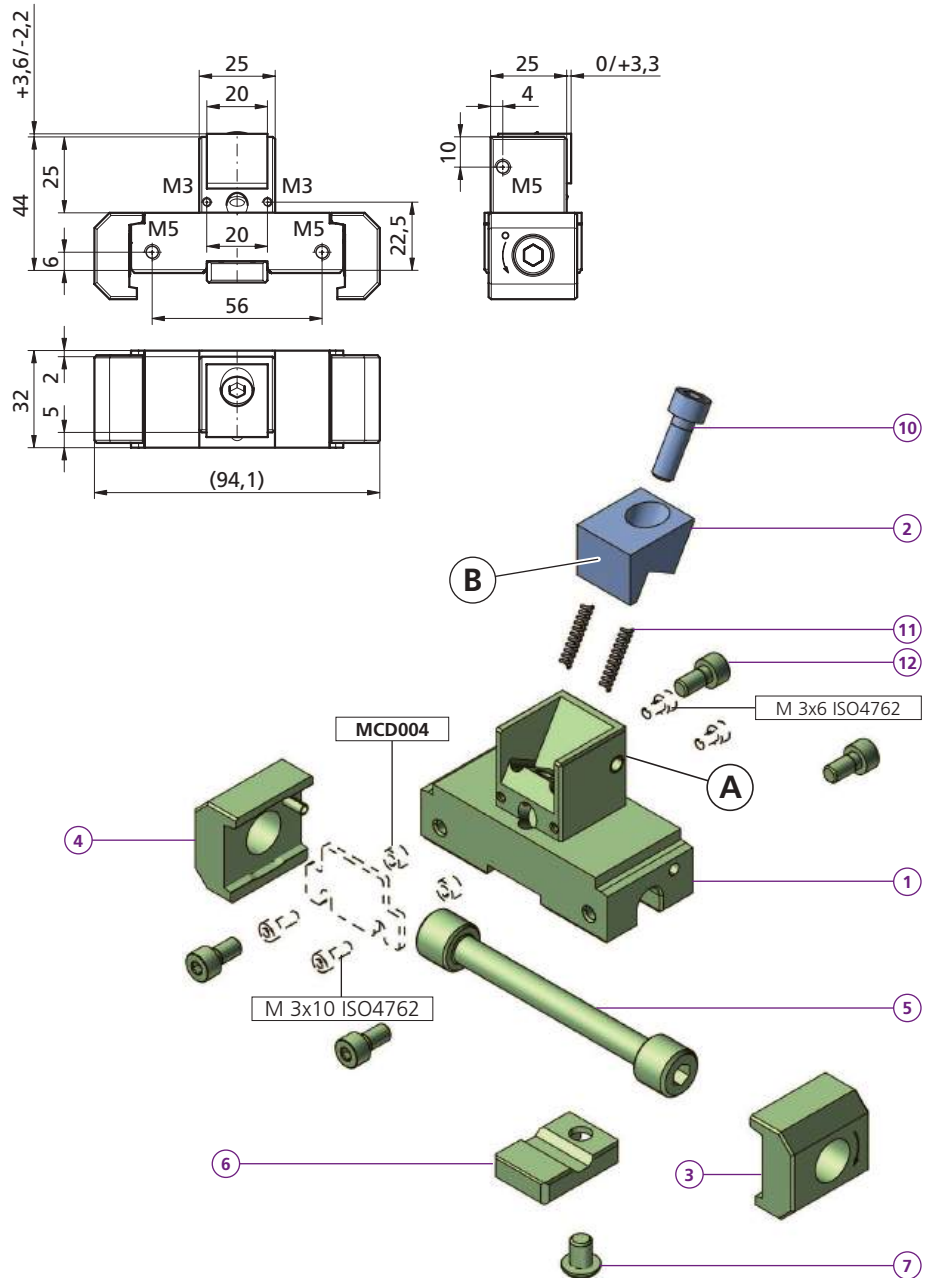
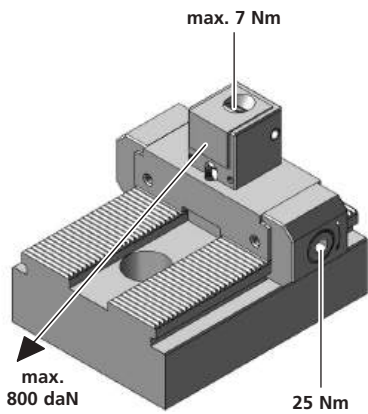
	PS5X19N49-20
1	1x TF140449
9	2x PCD005
8	2x M5X14ISO4762
kg	~1,1
	PS1F19N49-20
1	1x TF150961
	PS1R19N49-20
1	1x TF140448
2	1x
3	1x PCSP60R
4	1x PCSP60L
5	1x PCS14
6	1x PCGU2049
7	1x M6X8ISO7380
8	2x M5X14ISO4762
9	2x PCD005
10	1x M6X20ISO4762
11	2x FED0418
12	2x M5X10ISO4762
kg	~1,2

	B20	B21	B22
C	16	16	16
H	20	20	20
L	19	19	19
D	6,5	6,5	6,5
ø	12	12	12
i	HV700	HV700	*
	x0,2mm	x0,2mm	
kg	~0,06	~0,06	~0,06

Bestellbeispiel / Ordering example: 1x PS1R19N49-20 & 1x B21



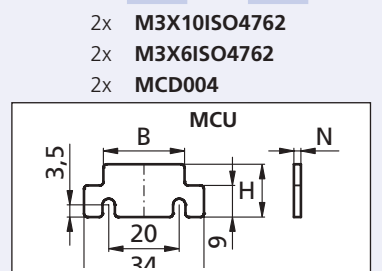
Separat bestellen / Order separately



PS1F25N44-13	
1	1x TF150960
PS1R25N44-13	
1	1x TF140450
2	1x
3	1x PCSP30R
4	1x PCSP30L
5	1x PCS14
6	1x PCGU2030
7	1x M6X8ISO7380
10	1x M6X16ISO4762
11	2x FED03018
12	4x M5X10ISO4762
kg	~0,6

Bestellbeispiel / Ordering example: 1x PS1R25N44-13 & 1x B14				
	B13	B14	B15	B16
C	20	20	20	20
H	16	16	16	16
L	13,8	13,8	13,8	19
D	6,5	6,5	6,5	6,5
e	10	10	10	10
i	HV700	HV700	*	*
	x0,2mm	x0,2mm		
kg	~0,05	~0,05	~0,05	~0,06

	H	B	N	kg
MCU11037	11	23	2	~0,004
MCU15037	15	23	2	~0,006
MCU18037	18	23	2	~0,008
MCU20037	20	23	2	~0,008
MCU22537	22,5	23	2	~0,008



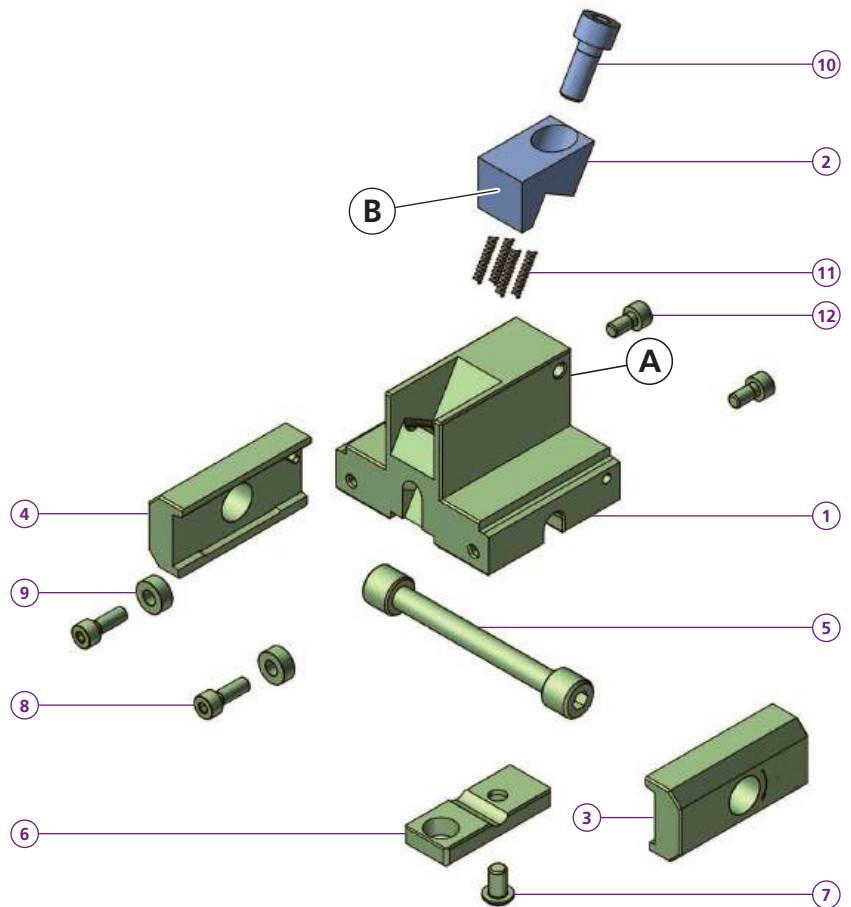
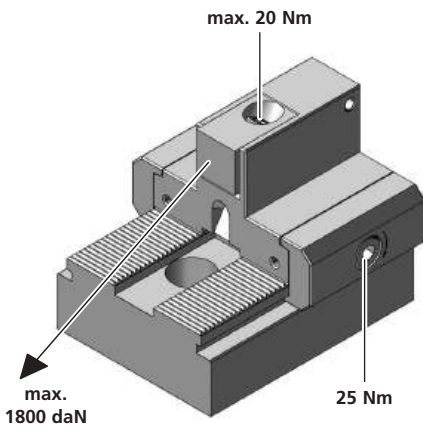
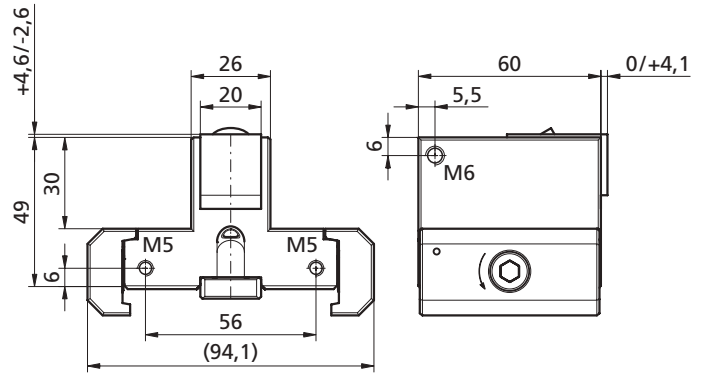
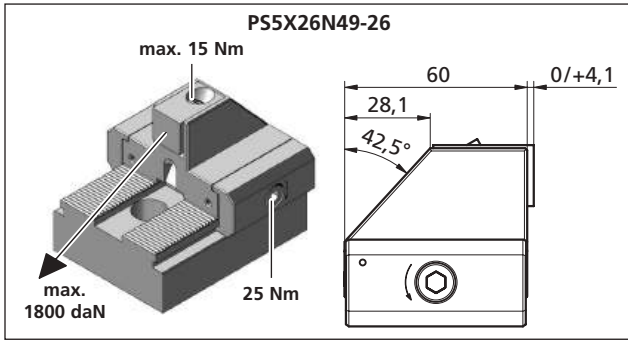
2x	M3X10ISO4762
2x	M3X6ISO4762
2x	MCD004

* = weicher Stahl / soft steel

Separat bestellen / Order separately

PS1R/F26N49-26

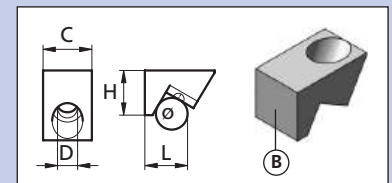
PS5X26N49-26



PS5X26N49-26	
1	1x TF140453
9	2x PCD005
8	2x M5X14ISO4762
kg	~1,1
PS1F26N49-26	
1	1x TF140451
PS1R26N49-26	
1	1x TF140452
2	1x
3	1x PCSP60R
4	1x PCSP60L
5	1x PCS14
6	1x PCGU2049
7	1x M6X8ISO7380
8	2x M5X14ISO4762
9	2x PCD005
10	1x M8X20ISO4762
11	4x FED0418
12	2x M5X10ISO4762
kg	~1,2

B	B26	B27	B28
C	20	20	20
H	20	20	20
L	19	19	19
D	9	9	9
e	12	12	12
i	HV700	HV700	*
	x0,2mm	x0,2mm	
kg	~0,07	~0,07	~0,07

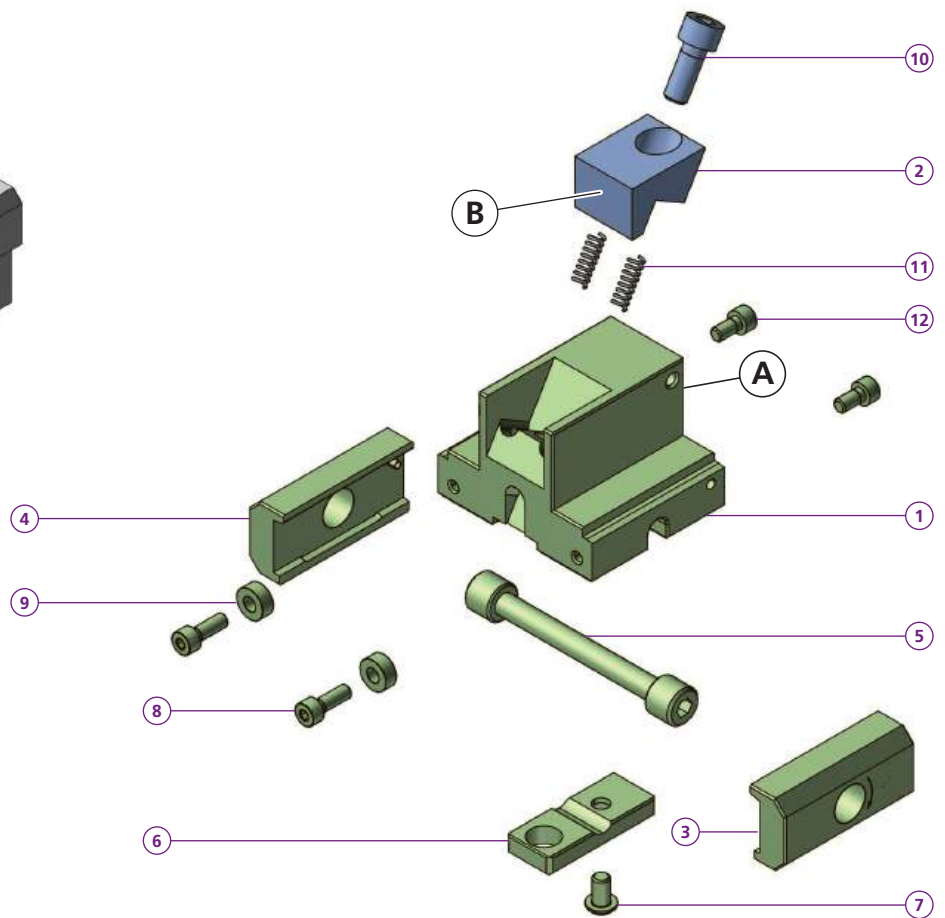
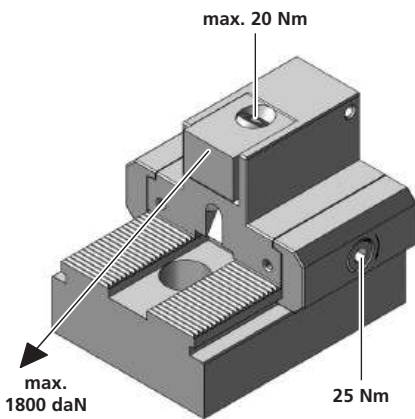
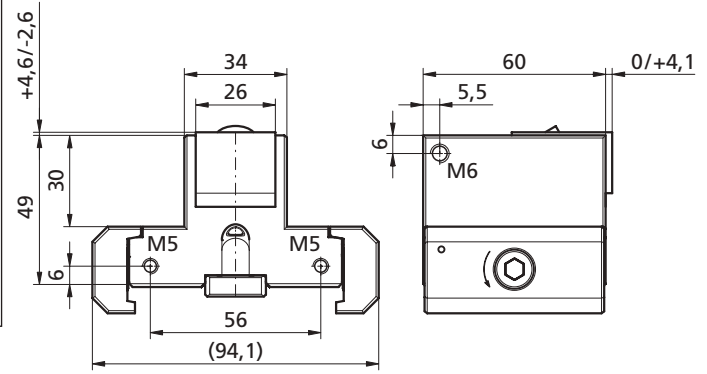
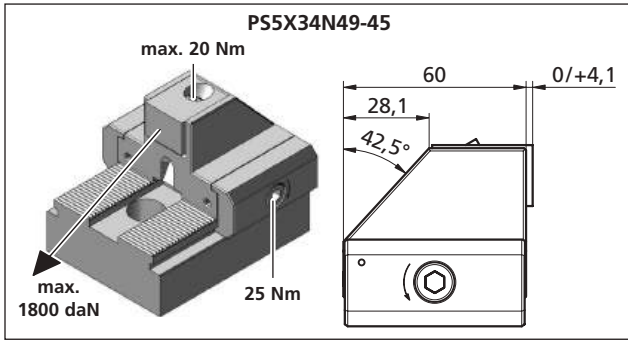
Bestellbeispiel / Ordering example: 1x PS1R26N49-26 & 1x B26



Separat bestellen / Order separately

PS1R/F34N49-45

PS5X34N49-45



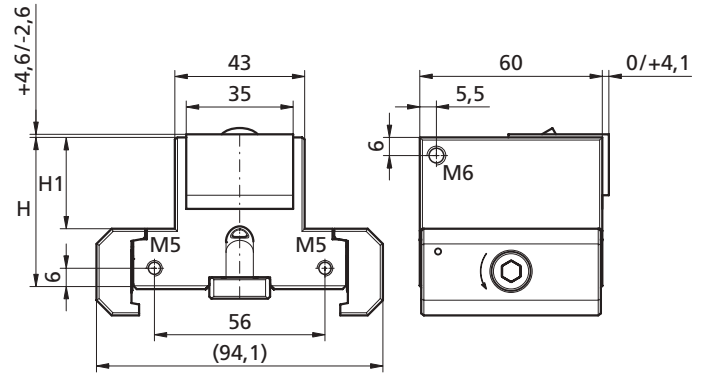
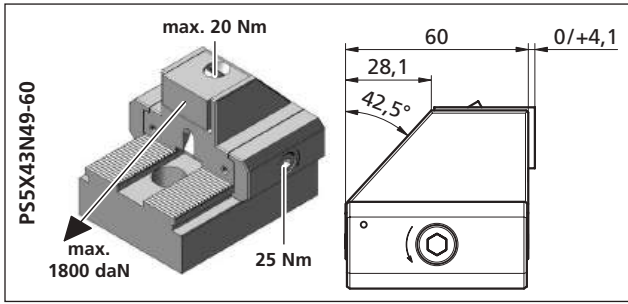
A	PS5X34N49-45
1	1x TF140455
9	2x PCD005
8	2x M5X14ISO4762
kg	~1,2
	PS1F34N49-45
1	1x TF191071
	PS1R34N49-45
1	1x TF140454
2	1x
3	1x PCSP60R
4	1x PCSP60L
5	1x PCS14
6	1x PCGU2049
7	1x M6X8ISO7380
8	2x M5X14ISO4762
9	2x PCD005
10	1x M8X20ISO4762
11	2x FED0618
12	2x M5X10ISO4762
kg	~1,3

Bestellbeispiel / Ordering example: 1x **PS5X34N49-45** & 1x **B47HM**

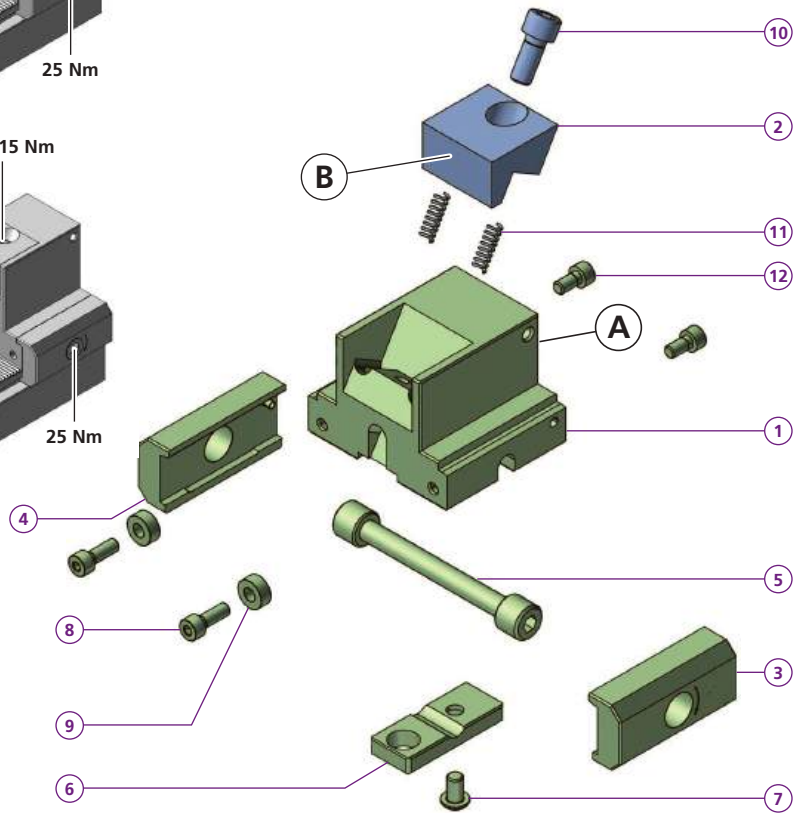
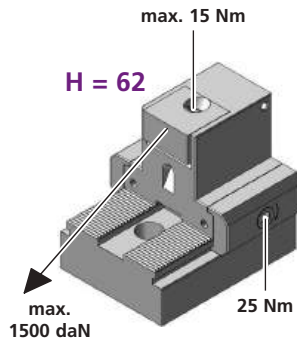
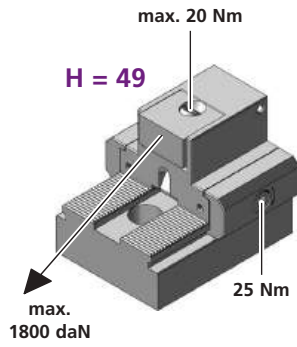
	B45	B46	B47	B47HM
C	26	26	26	26
H	20	20	20	20
L	19	19	19,1	19,1
D	9	9	9	9
e	12	12	12	12
i	HV700	HV700	*	HM
	x0,2mm	x0,2mm		
kg	~0,1	~0,1	~0,1	~0,1

* = weicher Stahl / soft steel

HM = Hartmetallbeschichtet / Carbide coated

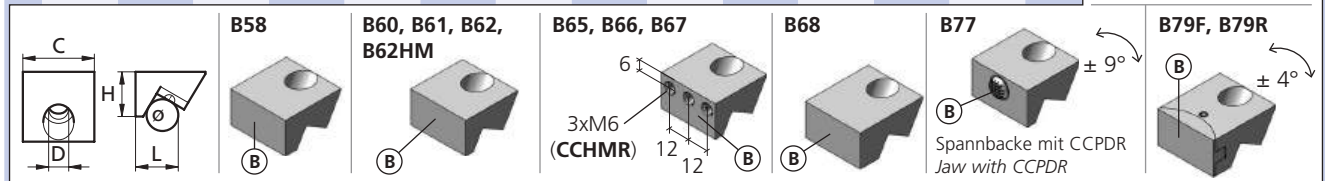
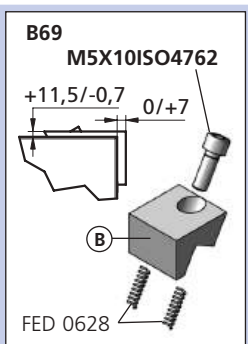


- PS5X43N49-60**
- 1x TF140458
 - 2x PCD005
 - 2x M5X14ISO4762
- kg ~1,3
- PS1F43N49-60**
- 1x TF140456
- PS1R43N49-60**
- 1x TF140457
 - 1x _____
 - 1x PCSP60R
 - 1x PCSP60L
 - 1x PCS14
 - 1x PCGU2049
 - 1x M6X8ISO7380
 - 2x M5X14ISO4762
 - 2x PCD005
 - 1x M8X20ISO4762
 - 2x FED0618
 - 2x M5X10ISO4762
- H = 49
H1 = 30
kg ~1,4
- PS1F43N62-60**
- 1x TF140459
- PS1R43N62-60**
- 1x TF140460
- H = 62
H1 = 43
kg ~1,7

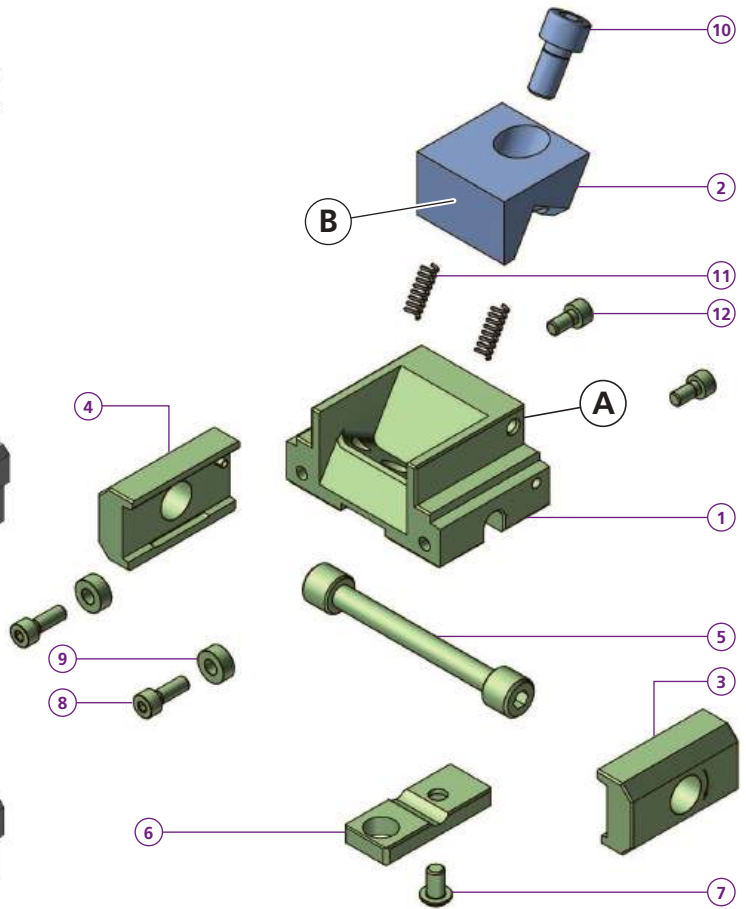
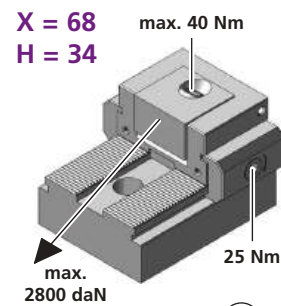
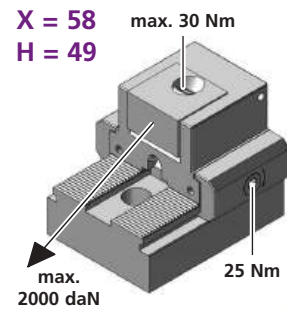
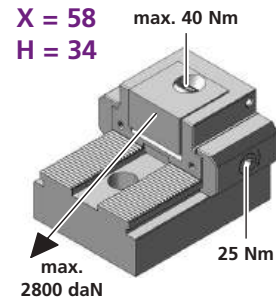
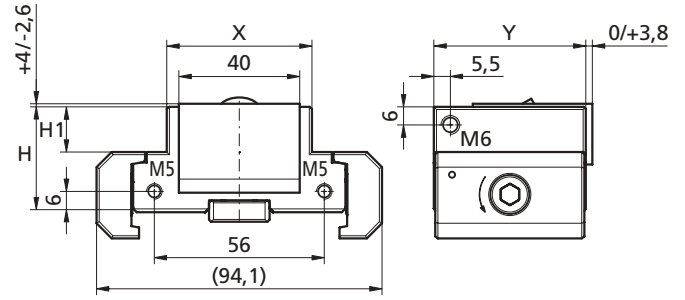
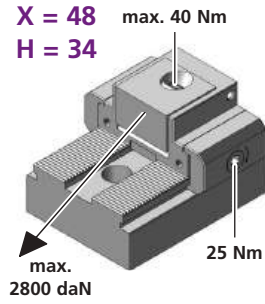


Bestellbeispiel / Ordering example: 1x PS1R43N49-60 & 1x B61

	B58	B60	B61	B62	B62HM	B65	B66	B67	B68	B69	B77	B79F	B79R
C	35	35	35	35	35	35	35	35	35	35	35	35	35
H	20	20	20	20	20	20	20	20	20	25	20	20	20
L	26	19	19	19	19	19	19	24	26	22	22	25	25
D	9	9	9	9	9	9	9	9	9	9	9	9	9
o	12	12	12	12	12	12	12	12	12	12	12	12	12
i	ALU	56HRC	56HRC	*	HM	HV700 x0,2mm	HV700 x0,2mm	HV700 x0,2mm	*	*	56HRC	HV700 x0,2mm	HV700 x0,2mm
kg	~0,07	~0,12	~0,12	~0,12	~0,12	~0,12	~0,12	~0,14	~0,15	~0,15	~0,12	~0,18	~0,18



Separat bestellen / Order separately



- PS1F48N34-80**
- 1 1x TF140461
- PS1R48N34-80**
- 1 1x TF140462
 - 2 1x
 - 3 1x PCSP50R
 - 4 1x PCSP50L
 - 5 1x PCS14
 - 6 1x PCGU2049
 - 7 1x M6X8ISO7380
 - 8 2x M5X14ISO4762
 - 9 2x PCD005
 - 10 1x M10X25ISO4762
 - 11 2x FED0618
 - 12 2x M5X10ISO4762
- X = 48
H = 34
H1 = 15
Y = 50
kg ~0,9

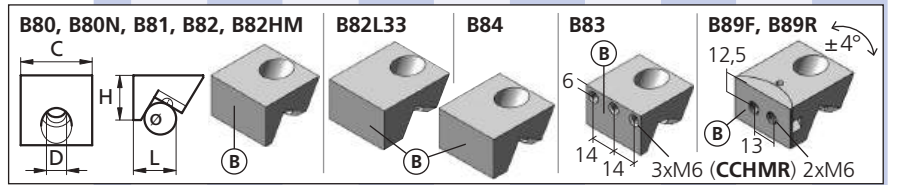
- PS1F58N34-80**
- 1 1x TF140463
- PS1R58N34-80**
- 1 1x TF140464
- X = 58
H = 34
H1 = 15
Y = 50
kg ~0,9

- PS1R58N49-80**
- 1 1x TK120129
 - 3 1x PCSP60R
 - 4 1x PCSP60L
- X = 58
H = 49
H1 = 30
Y = 60
kg ~1,6

- PS1F68N34-80**
- 1 1x TF140465
- PS1R68N34-80**
- 1 1x TF140466
- X = 68
H = 34
H1 = 15
Y = 50
kg ~1,0

Bestellbeispiel / Ordering example: 1x PS1F68N34-80 & 1x B82HM

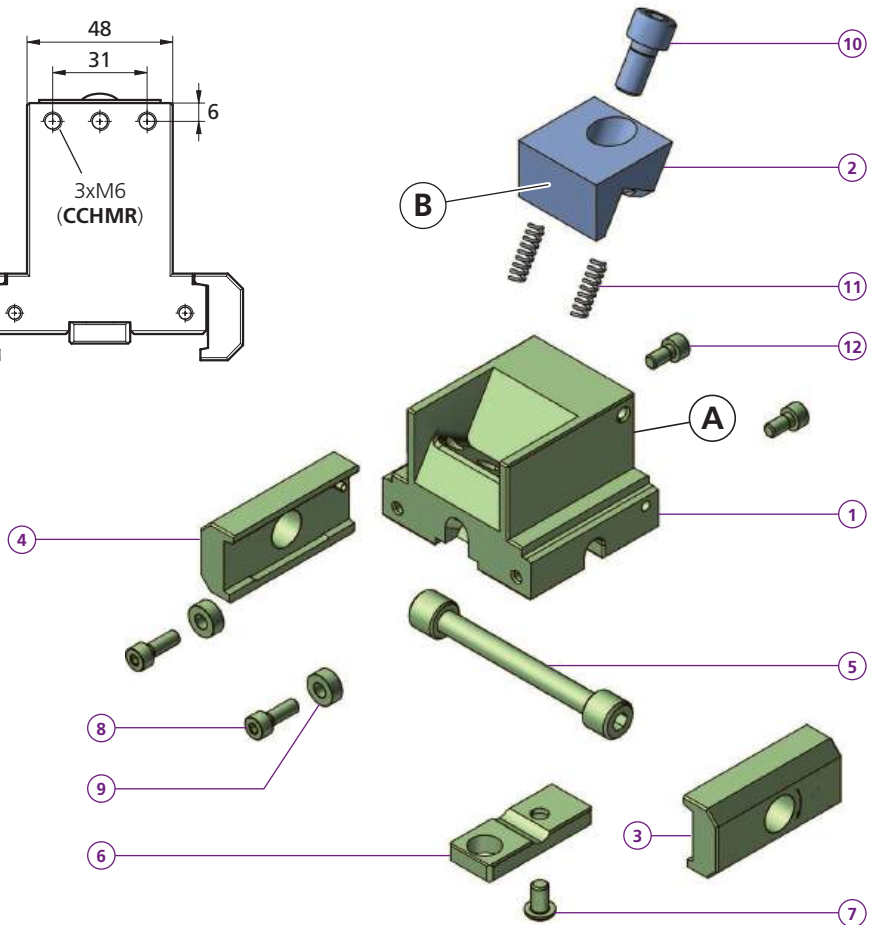
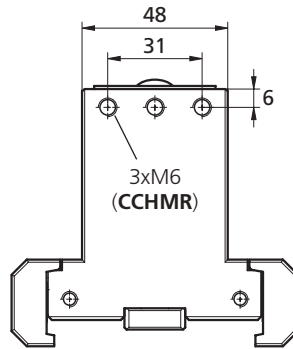
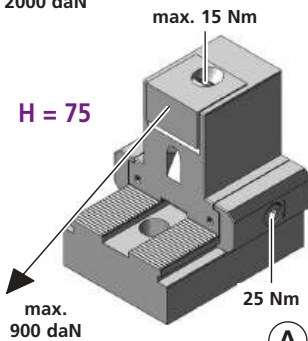
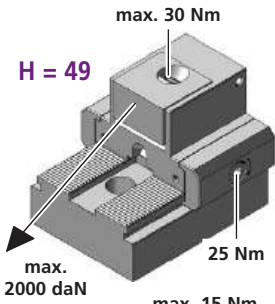
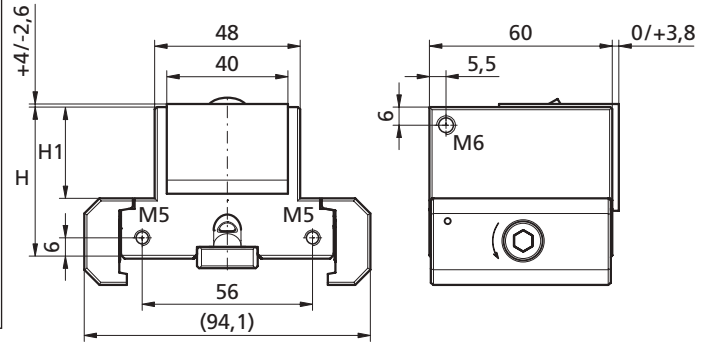
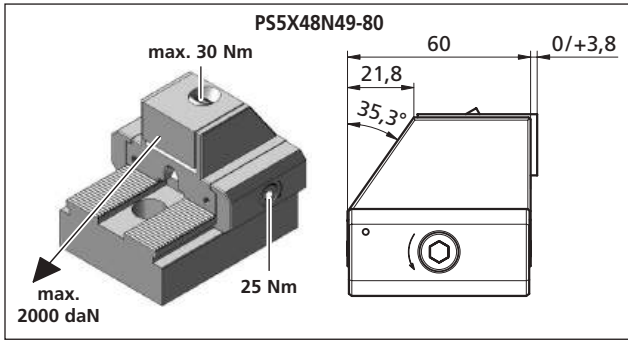
	B80	B80N	B81	B82	B82L33	B82HM	B83	B84	B89F	B89R
C	40	40	40	40	40	40	40	40	40	40
H	25	25	25	25	25	25	25	25	25	25
L	22	22	22	22,2	33	22,2	22	26,3	29	29
D	11	11	11	11	11	11	11	11	11	11
ø	15	15	15	15	15	15	15	15	15	15
i	56HRC	HV700 x0,2mm	56HRC	*	*	56HRC	HV700 x0,2mm	*	HV700 x0,2mm	HV700 x0,2mm
kg	~0,2	~0,2	~0,2	~0,2	~0,28	~0,2	~0,2	~0,2	~0,24	~0,24



* = weicher Stahl / soft steel

HM = Hartmetallbeschichtet / Carbide coated

Separat bestellen / Order separately

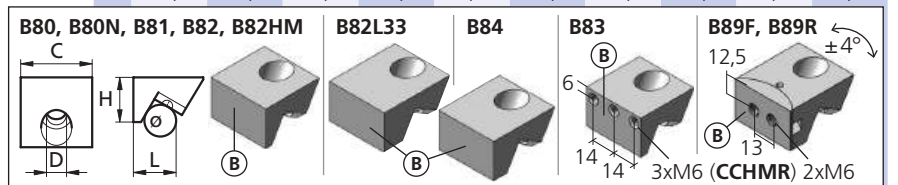


PS5X48N49-80
1x TF140469
2x PCD005
2x M5X14ISO4762
kg ~1,3
PS1F48N49-80
1x TF140467
PS1R48N49-80
1x TF140468
1x [Symbol]
1x PCSP60R
1x PCSP60L
1x PCS14
1x PCGU2049
1x M6X8ISO7380
2x M5X14ISO4762
2x PCD005
1x M10X25ISO4762
2x FED0618
2x M5X10ISO4762
H = 49
H1 = 30
kg ~1,4

PS1R48N75-80
1x TF140471
H = 75
H1 = 56
kg ~2,0

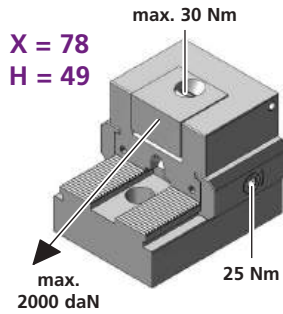
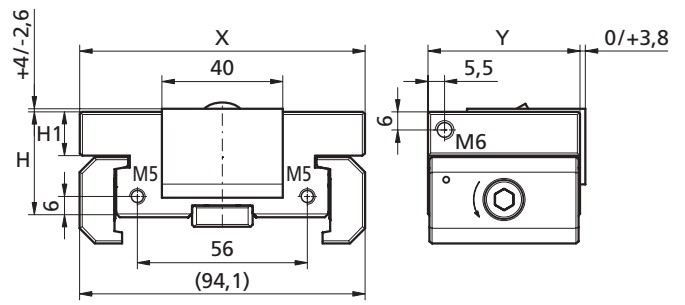
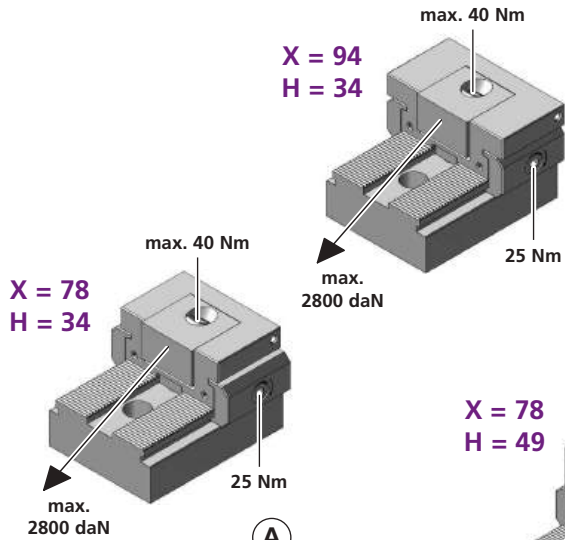
Bestellbeispiel / Ordering example: 1x PS1F48N49-80 & 1x B80

	B80	B80N	B81	B82	B82L33	B82HM	B83	B84	B89F	B89R
C	40	40	40	40	40	40	40	40	40	40
H	25	25	25	25	25	25	25	25	25	25
L	22	22	22	22,2	33	22,2	22	26,3	29	29
D	11	11	11	11	11	11	11	11	11	11
ø	15	15	15	15	15	15	15	15	15	15
i	56HRC	HV700 x0,2mm	56HRC	*	*	56HRC	HV700 x0,2mm	*	HV700 x0,2mm	HV700 x0,2mm
kg	~0,2	~0,2	~0,2	~0,2	~0,28	~0,2	~0,2	~0,2	~0,24	~0,24



* = weicher Stahl / soft steel

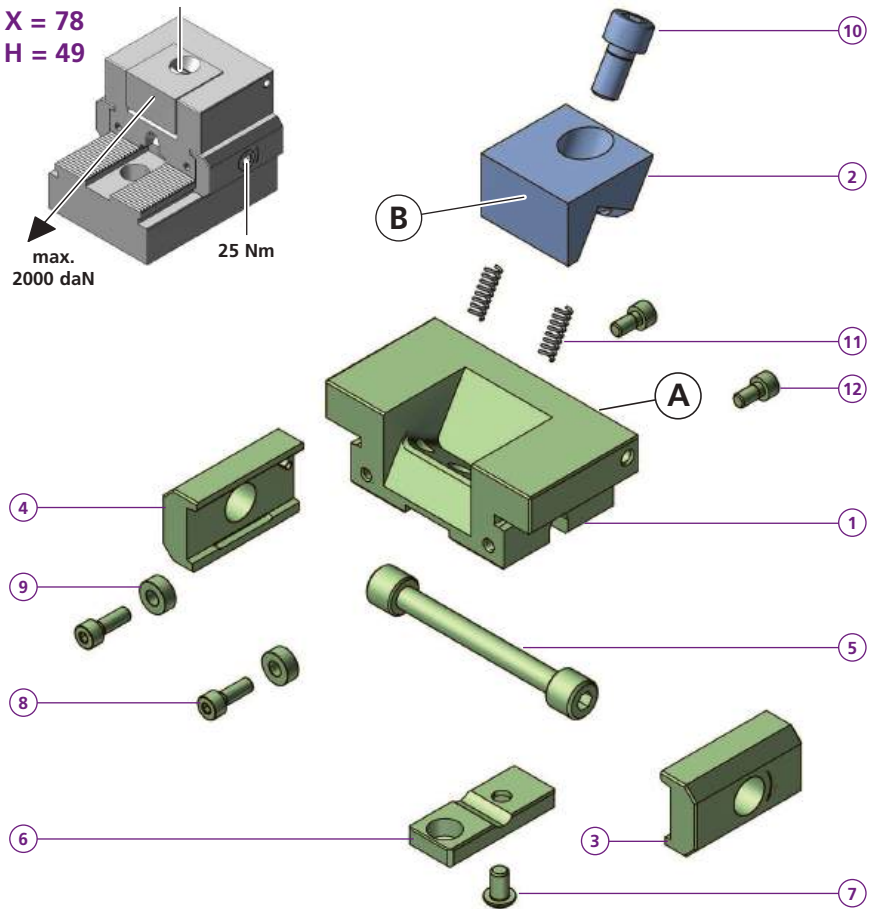
HM = Hartmetallbeschichtet / Carbide coated



- PS1F78N34-80**
- 1 1x TF140472
- PS1R78N34-80**
- 1 1x TF140473
 - 2 1x
 - 3 1x PCSP50R
 - 4 1x PCSP50L
 - 5 1x PCS14
 - 6 1x PCGU2049
 - 7 1x M6X8ISO7380
 - 8 2x M5X14ISO4762
 - 9 2x PCD005
 - 10 1x M10X25ISO4762
 - 11 2x FED0618
 - 12 2x M5X10ISO4762
- X = 48
H = 34
H1 = 15
Y = 50
kg ~1,1

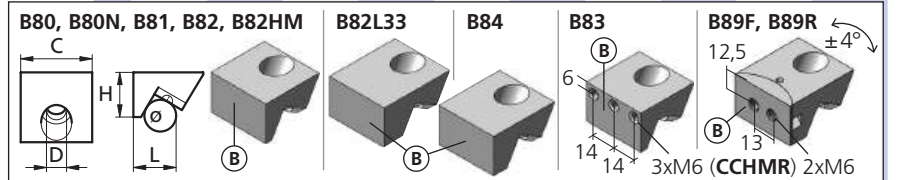
- PS1F94N34-80**
- 1 1x TF140476
- PS1R94N34-80**
- 1 1x TF140477
- X = 94
H = 34
H1 = 15
Y = 50
kg ~1,1

- PS1F78N49-80**
- 1 1x TF140474
- PS1R78N49-80**
- 1 1x TF140475
 - 3 1x PCSP60R
 - 4 1x PCSP60L
- X = 78
H = 49
H1 = 30
Y = 60
kg ~1,8



Bestellbeispiel / Ordering example: 1x PS1R94N34-80 & 1x B80

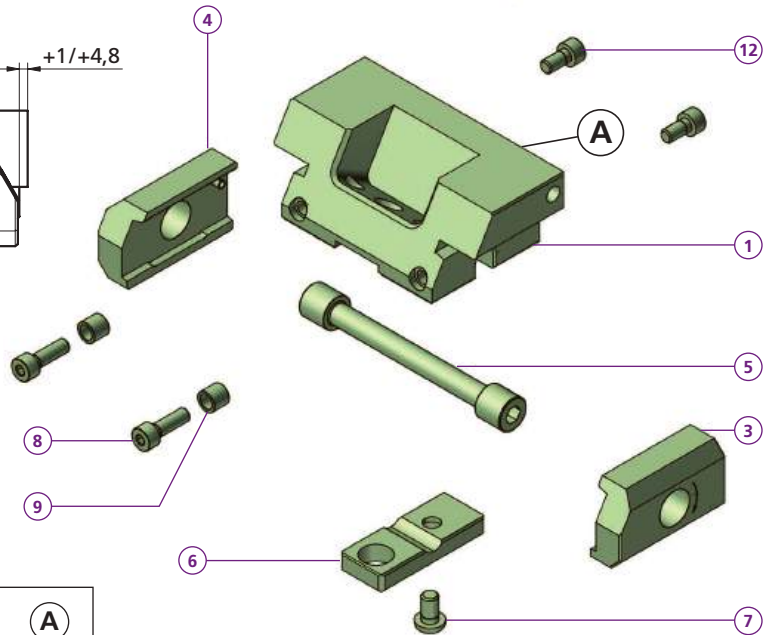
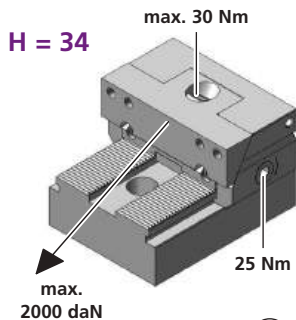
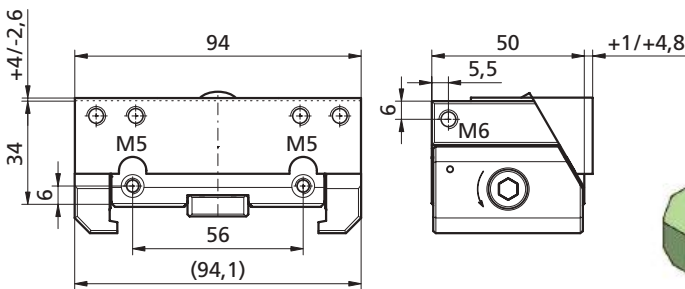
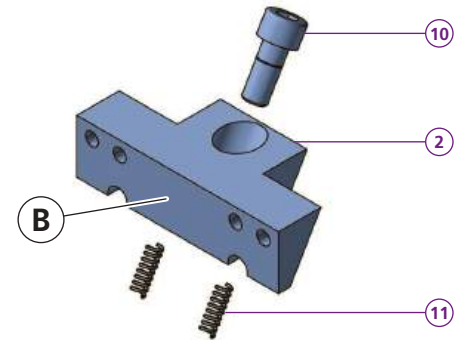
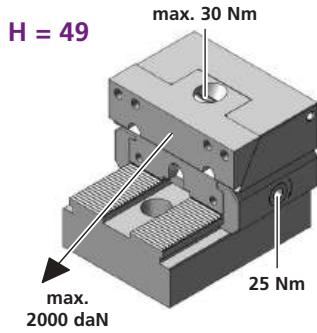
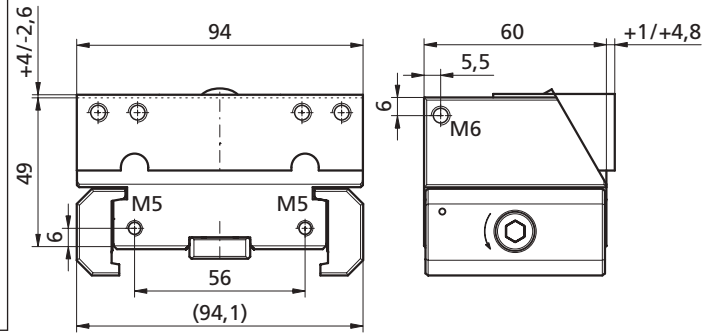
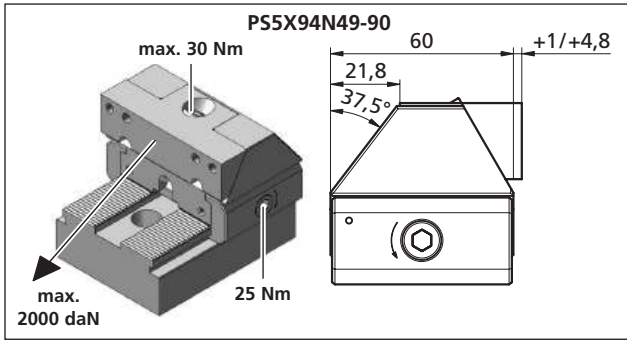
	B80	B80N	B81	B82	B82L33	B82HM	B83	B84	B89F	B89R
C	40	40	40	40	40	40	40	40	40	40
H	25	25	25	25	25	25	25	25	25	25
L	22	22	22	22,2	33	22,2	22	26,3	29	29
D	11	11	11	11	11	11	11	11	11	11
ø	15	15	15	15	15	15	15	15	15	15
i	56HRC	HV700 x0,2mm	56HRC	*	*	56HRC	HV700 x0,2mm	*	HV700 x0,2mm	HV700 x0,2mm
kg	~0,2	~0,2	~0,2	~0,2	~0,28	~0,2	~0,2	~0,2	~0,24	~0,24



* = weicher Stahl / soft steel

HM = Hartmetallbeschichtet / Carbide coated

Separat bestellen / Order separately

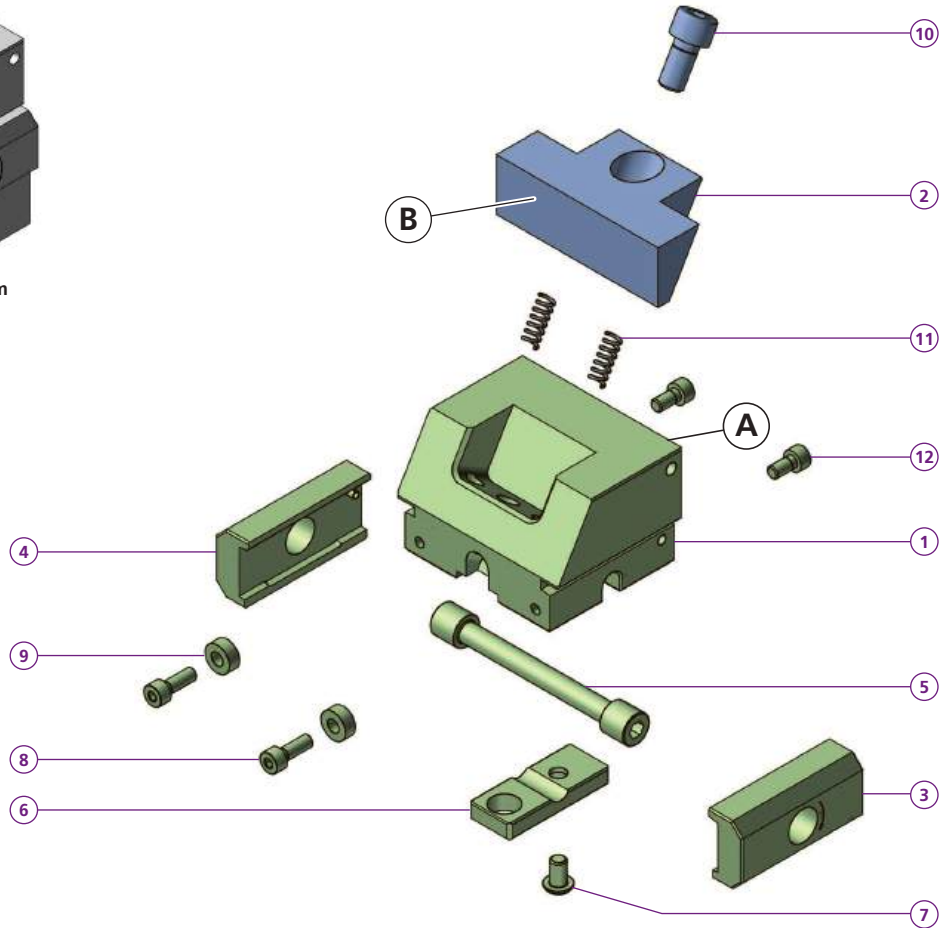
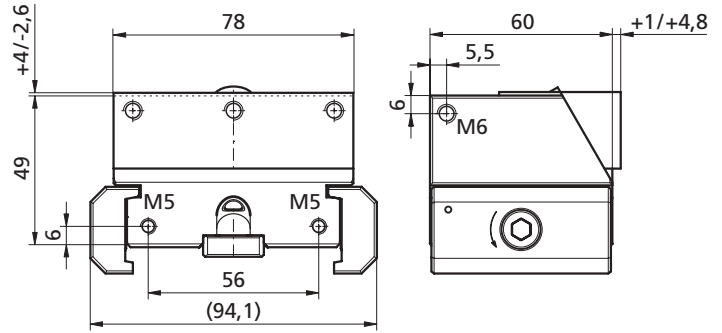
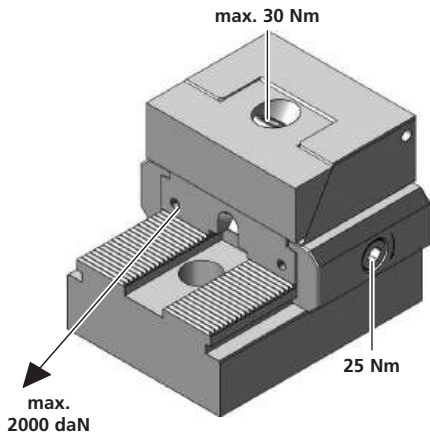


PS1F94N34-90		PS1R94N34-90		PS5X94N49-90	
1	1x TF140478	1	1x TF140479	1	1x TF140482
2	1x	2	1x	3	1x PCSP60R
3	1x PCSP50RF	3	1x PCSP60L	4	1x PCSP60L
4	1x PCSP50LF	4	1x PCSP60L	9	2x PCD005
5	1x PCS14	5	1x PCSP60L	8	2x M5X14ISO4762
6	1x PCGU2049	6	1x PCSP60L	kg	~1,8
7	1x M6X8ISO7380	7	1x PCSP60L	PS1F94N49-90	
8	2x M5X16ISO4762	8	1x PCSP60L	1	1x TF140480
9	2x PCD008	9	1x PCSP60L	2	1x
10	1x M10X25ISO4762	10	1x PCSP60L	PS1R94N49-90	
11	2x FED0618	11	1x PCSP60L	1	1x TF140481
12	2x M5X10ISO4762	12	1x PCSP60L	2	1x
H	= 34	13	1x PCSP60L	3	1x PCSP60R
kg	~1,0	14	1x PCSP60L	4	1x PCSP60L
		15	1x PCSP60L	8	2x M5X14ISO4762
		16	1x PCSP60L	9	2x PCD005
		17	1x PCSP60L	kg	~2,0

Bestellbeispiel / Ordering example:
1x PS1F94N34-90 & 1x B91

	B90	B91	B92	B93	B94
C	94	94	94	94	94
H	25	25	25	25	25
L	23	23	23	23	40
D	11	11	11	11	11
e	15	15	15	15	15
i	HV700 x0,2mm	HV700 x0,2mm	*	HV700 x0,2mm	*
kg	~0,33	~0,33	~0,33	~0,33	~0,64

Separat bestellen / Order separately



PS1F78N49-90	A
1 1x TH160490	
PS1R78N49-90	
1 1x TH160490	
2 1x	
3 1x PCSP60R	
4 1x PCSP60L	
5 1x PCS14	
6 1x PCGU2049	
7 1x M6X8ISO7380	
8 2x M5X14ISO4762	
9 2x PCD005	
10 1x M10X25ISO4762	
11 2x FED0618	
12 2x M5X10ISO4762	
kg ~1,8	

Bestellbeispiel / Ordering example:
1x PS1F78N49-90 & 1x B90F78

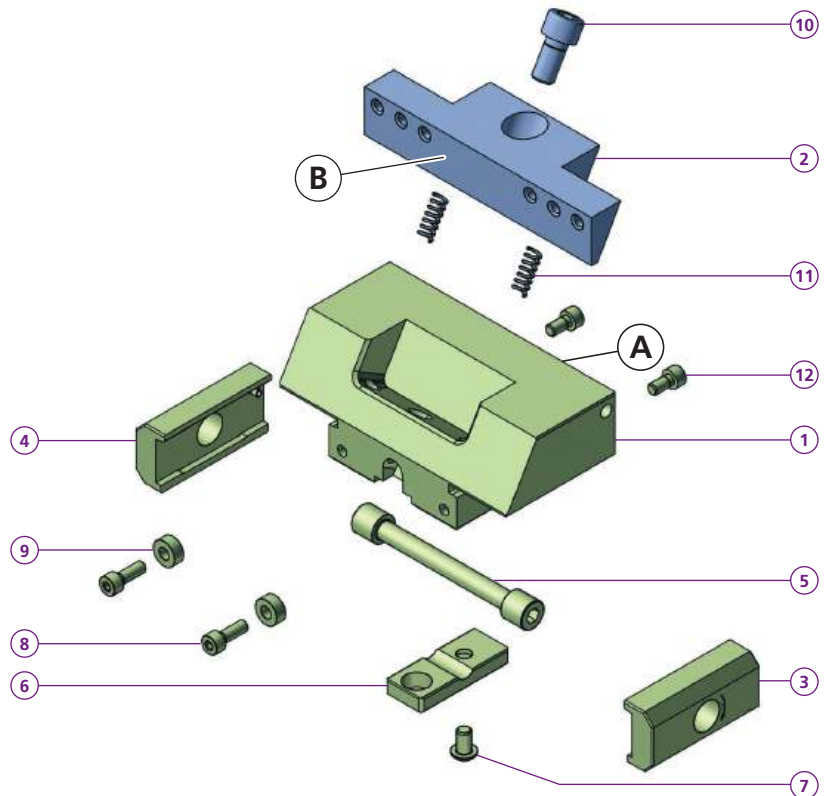
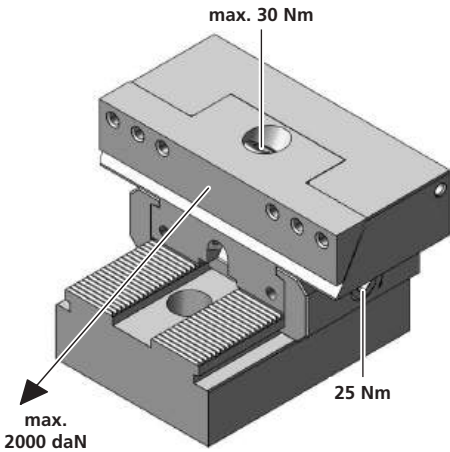
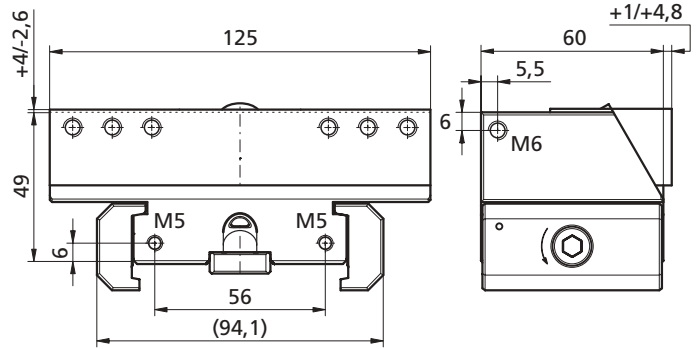
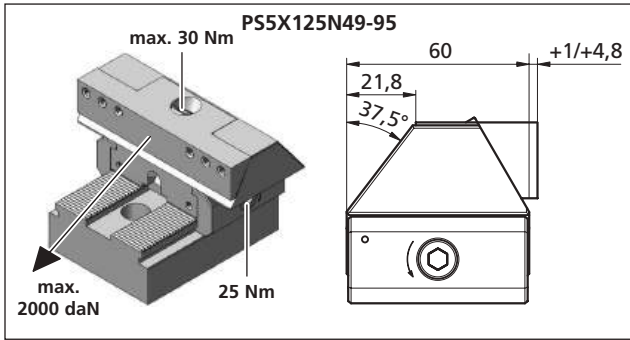
	B90F78	B90W78	B90R78
C	78	78	78
H	25	25	25
L	23	28	23
D	11	11	11
e	15	15	15
i	HV700	*	HV700
	x0,2mm		x0,2mm
kg	~0,3	~0,37	~0,3

B90R78

B90F78, B90W78

3xM6 (CCHMR)

* = weicher Stahl / soft steel



PS5X125N49-95
1x TF140485
2x PCD005
2x M5X14ISO4762
kg ~2,0
PS1F125N49-95
1x TF140483
PS1R125N49-95
1x TF140484
1x PCSP60R
1x PCSP60L
1x PCS14
1x PCGU2049
1x M6X8ISO7380
2x M5X14ISO4762
2x PCD005
1x M10X25ISO4762
2x FED0618
2x M5X10ISO4762
kg ~2,3

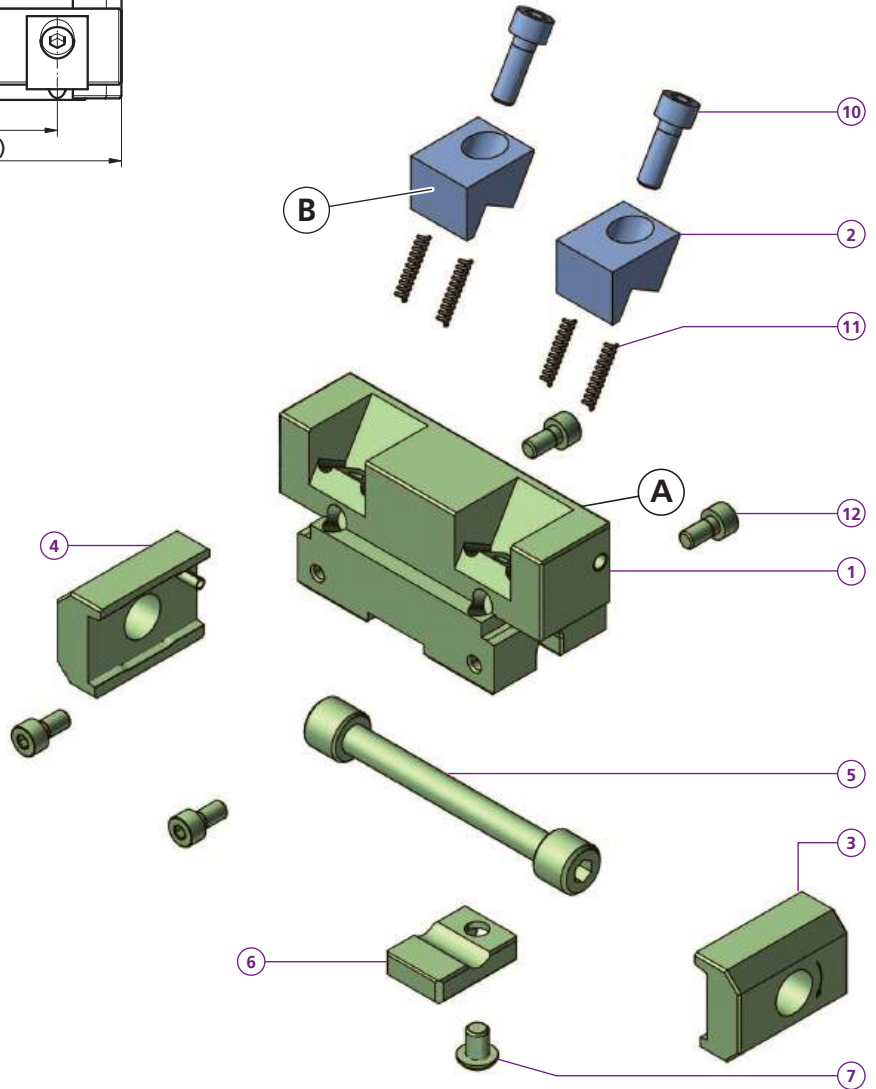
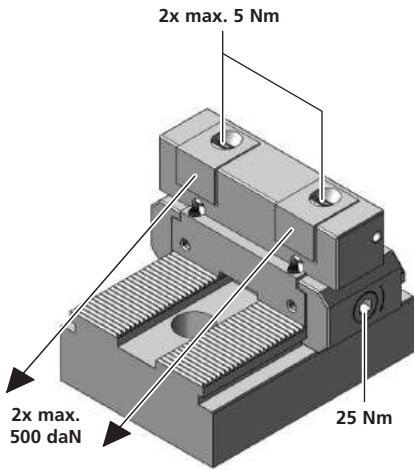
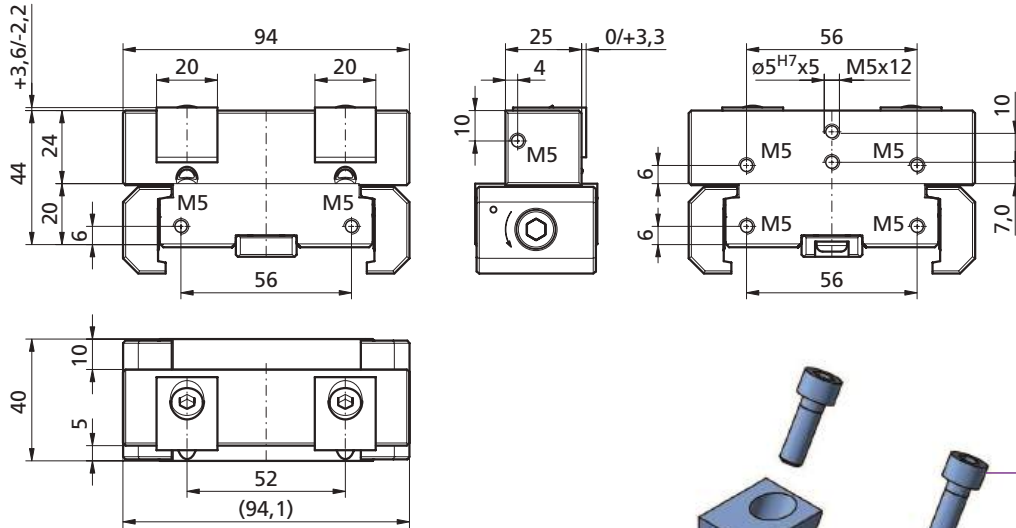
Bestellbeispiel / Ordering example: 1x PS5X125N49-95 & 1x B95

	B95	B96	B97	B98	B99
C	125	125	125	125	125
H	25	25	25	25	25
L	23	23	23	30	23
D	11	11	11	11	11
ø	15	15	15	15	15
i	HV700	HV700	*	*	HV700
	x0,2mm	x0,2mm			x0,2mm
kg	~0,46	~0,45	~0,46	~0,63	~0,45

B95, B96, B97, B99		B98	
6xM6 (CCHMR)		110	
		84	
		58	
		6	

Separat bestellen / Order separately

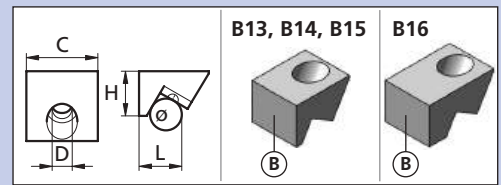
PS2G94N44-13



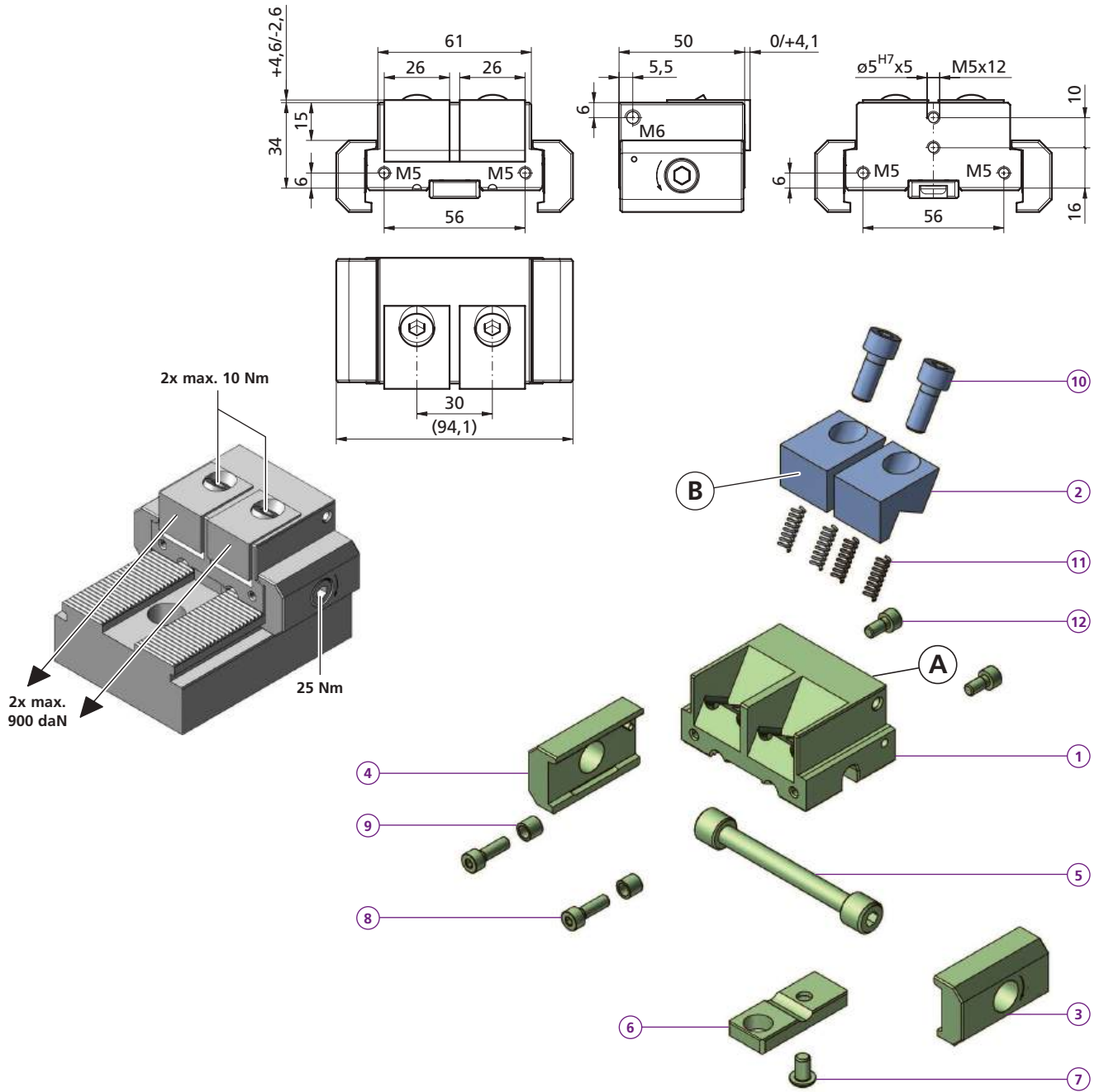
PS2G94N44-13	
1	1x TF140486
2	2x
3	1x PCSP40R
4	1x PCSP40L
5	1x PCS14
6	1x PCGU2030
7	1x M6X8ISO7380
10	2x M6X16ISO4762
11	4x FED0318
12	4x M5X10ISO4762
kg	~1,0

	B13	B14	B15	B16
C	20	20	20	20
H	16	16	16	16
L	13,8	13,8	13,8	19
D	6,5	6,5	6,5	6,5
ø	10	10	10	10
i	HV700	HV700	*	*
	x0,2mm	x0,2mm		
kg	~0,05	~0,05	~0,05	~0,06

Bestellbeispiel / Ordering example: 1x PS2G94N44-13 & 2x B14



* = weicher Stahl / soft steel

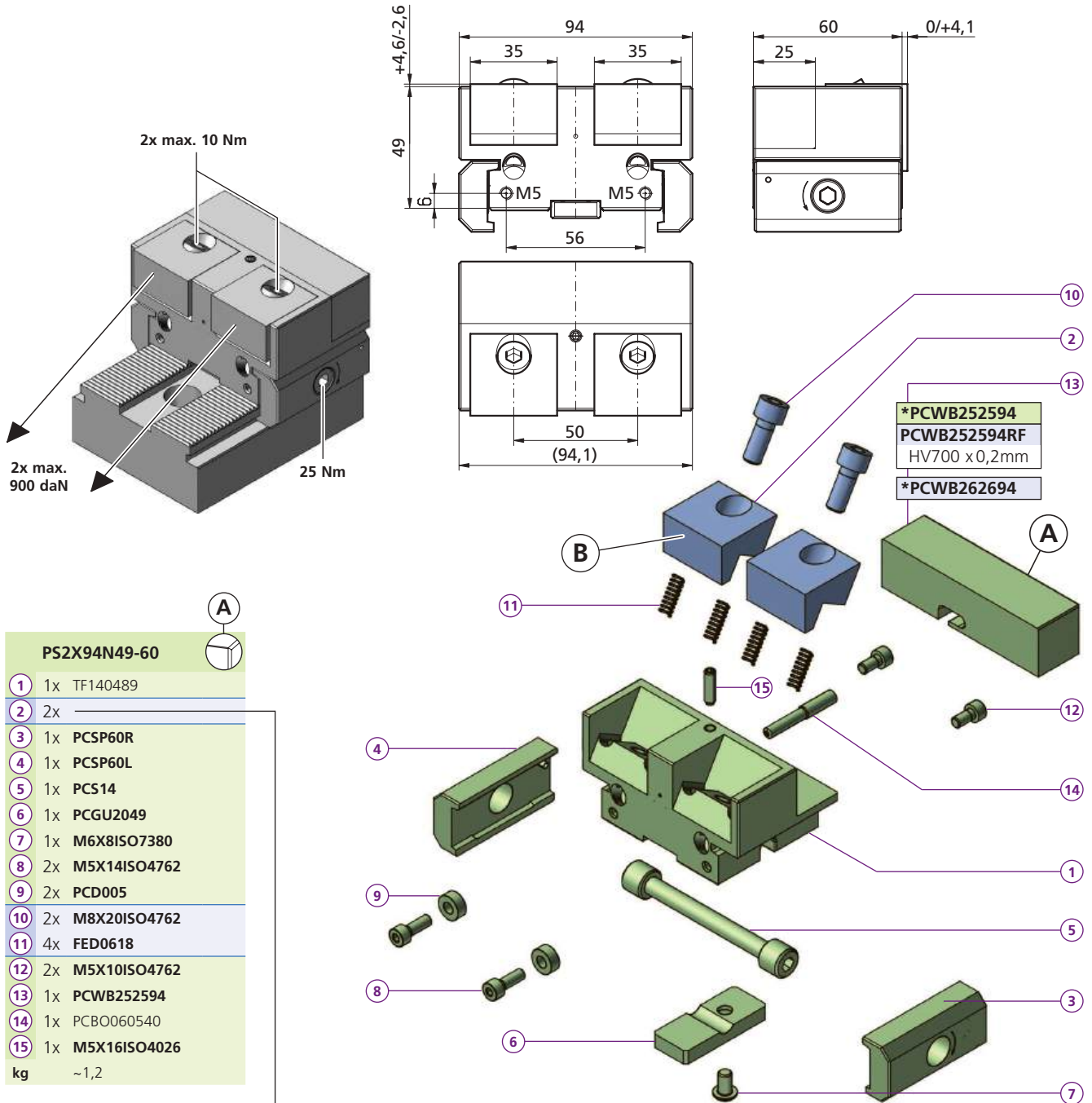


A	PS2F61N34-45
1	1x TF140487
A	PS2R61N34-45
1	1x TF140488
2	2x
3	1x PCSP50R
4	1x PCSP50L
5	1x PCS14
6	1x PCGU2049
7	1x M6X8ISO7380
8	2x M5X16ISO4762
9	2x PCD008
10	2x M8X20ISO4762
11	4x FED0618
12	2x M5X10ISO4762
kg	~1,0

Bestellbeispiel / Ordering example: 1x PS2R61N34-45 & 2x B47HM

	B45	B46	B47	B47HM
C	26	26	26	26
H	20	20	20	20
L	19	19	19,1	19,1
D	9	9	9	9
ø	12	12	12	12
i	HV700	HV700	*	HM
	x0,2mm	x0,2mm		
kg	~0,1	~0,1	~0,1	~0,1

Separat bestellen / Order separately

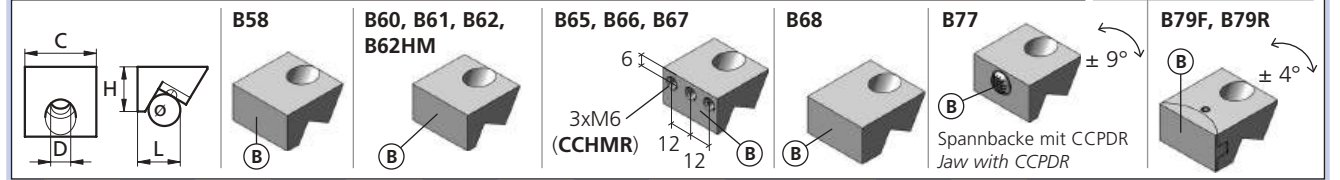
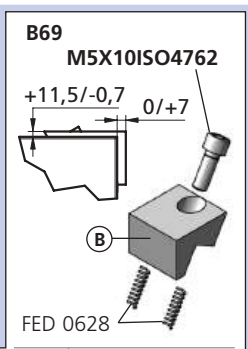


PS2X94N49-60

1	1x	TF140489
2	2x	
3	1x	PCSP60R
4	1x	PCSP60L
5	1x	PCS14
6	1x	PCGU2049
7	1x	M6X8ISO7380
8	2x	M5X14ISO4762
9	2x	PCD005
10	2x	M8X20ISO4762
11	4x	FED0618
12	2x	M5X10ISO4762
13	1x	PCWB252594
14	1x	PCBO060540
15	1x	M5X16ISO4026
kg		~1,2

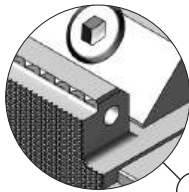
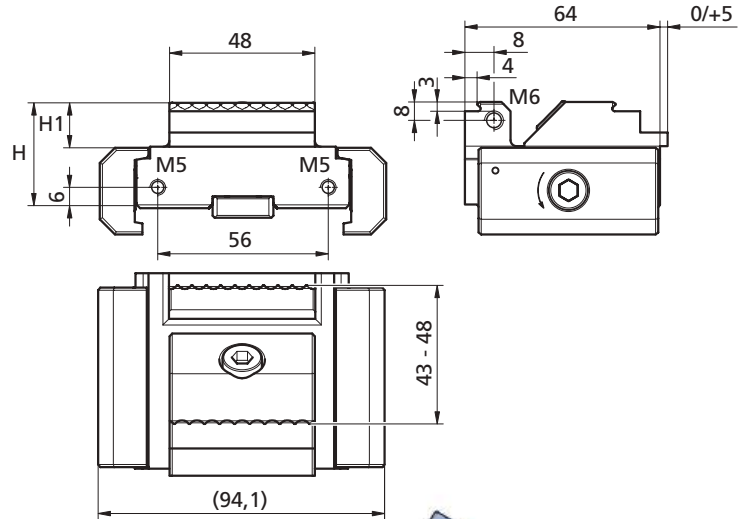
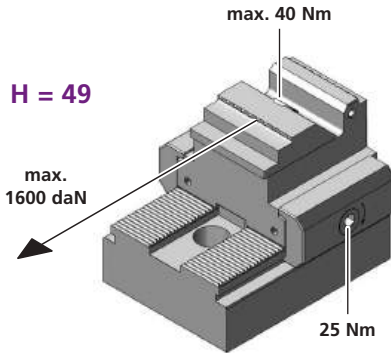
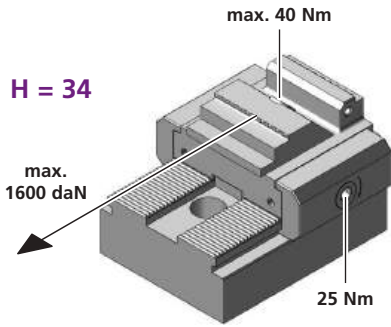
Bestellbeispiel / Ordering example: 1x PS2X94N49-60 & 2x B58

	B58	B60	B61	B62	B62HM	B65	B66	B67	B68	B69	B77	B79F	B79R
C	35	35	35	35	35	35	35	35	35	35	35	35	35
H	20	20	20	20	20	20	20	20	20	25	20	20	20
L	26	19	19	19	19	19	19	24	26	22	22	25	25
D	9	9	9	9	9	9	9	9	9	9	9	9	9
o	12	12	12	12	12	12	12	12	12	12	12	12	12
i	ALU	56HRC	56HRC	*	HM	HV700 x0,2mm	HV700 x0,2mm	HV700 x0,2mm	*	*	56HRC	HV700 x0,2mm	HV700 x0,2mm
kg	~0,07	~0,12	~0,12	~0,12	~0,12	~0,12	~0,12	~0,14	~0,15	~0,15	~0,12	~0,18	~0,18



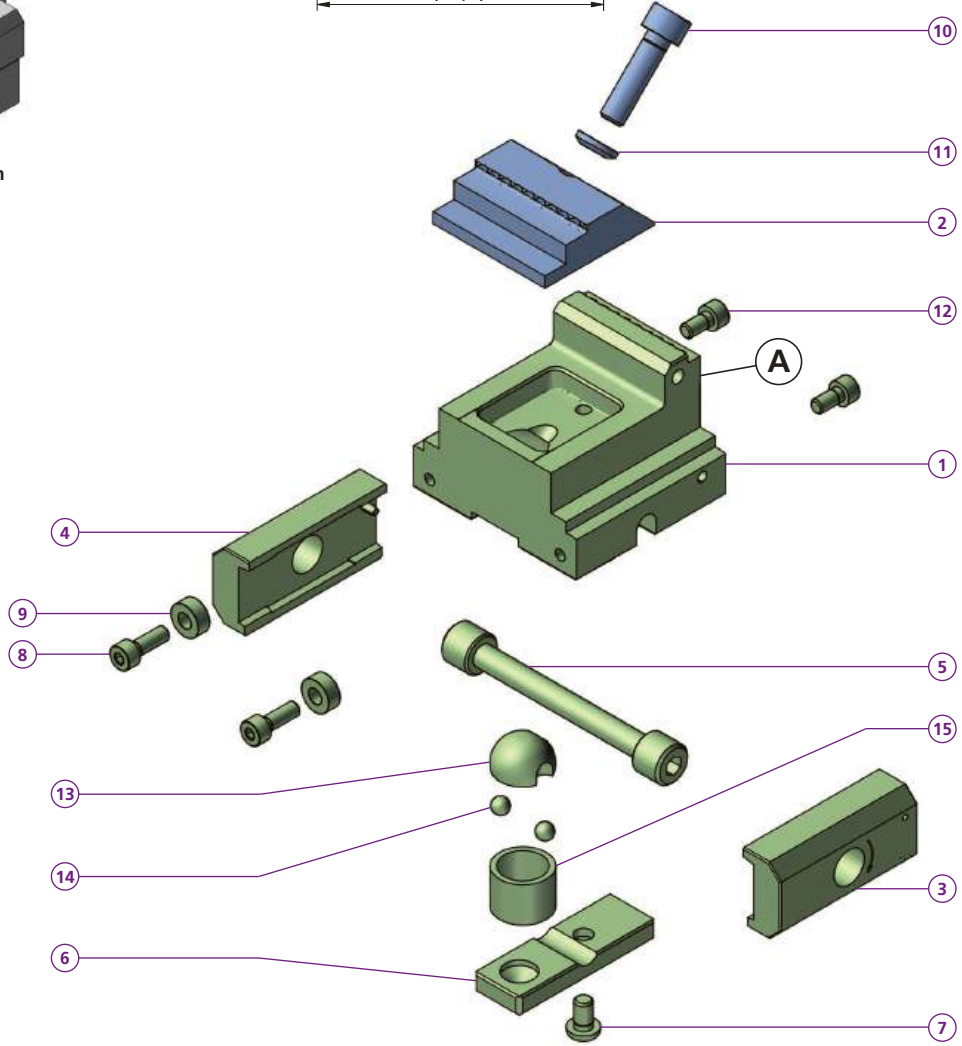
* = weicher Stahl / soft steel HM = Hartmetallbeschichtet / Carbide coated ALU = ENAW-7022

Separat bestellen / Order separately



PS1P48L34-105

- 1 1x TW100098-01
 - 2 1x
 - 3 1x PCSP60R
 - 4 1x PCSP60L
 - 5 1x PCS14
 - 6 1x PCGU2059
 - 7 1x M6X8ISO7380
 - 8 2x M5X14ISO4762
 - 9 2x PCD005
 - 10 1x M8X28ISO4762
 - 11 1x PCUSR16
 - 12 2x M5X10ISO4762
 - 13 1x PCKMR45M8
 - 14 2x D=6 DIN 5401
- H = 34
H1 = 15
kg ~1,0



p. 84, 85

PS1PF48L34-105

- 1 1x TK140780
- H = 49
H1 = 30
kg ~1,0

PS1P48L49-105

- 1 1x TK120011
 - 15 1x PCD20L15
- H = 49
H1 = 30
kg ~1,4

PS1PF48L49-105

- 1 1x TK140781
 - 15 1x PCD20L15
- H = 49
H1 = 30
kg ~1,4

Bestellbeispiel / Ordering example:
1x PS1P48L34-105 & 1x B115

Drehmoment Torque		Spannkraft Workholding force		
Nm	(lb-ft)	~daN	~(lb)	~t
10	7,4	= 400	880	0,4
20	14,8	= 800	1'760	0,8
30	22,2	= 1'200	2'650	1,2
40	29,6	= 1'600	3'530	1,6

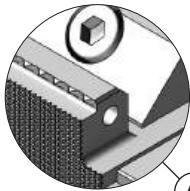
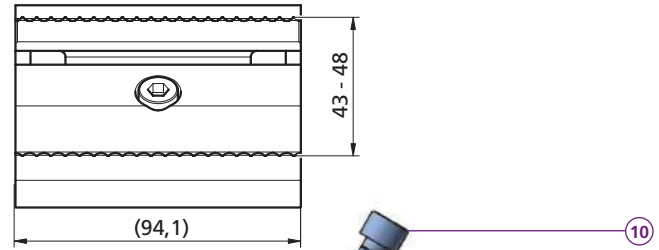
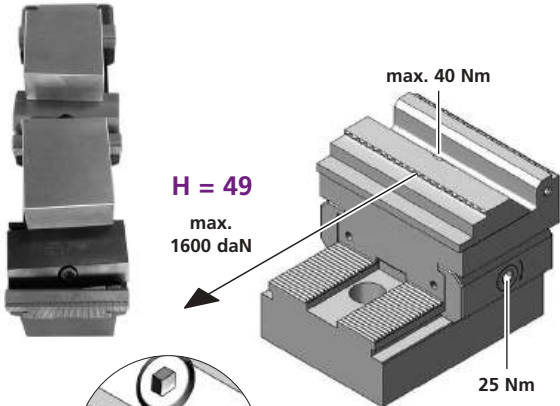
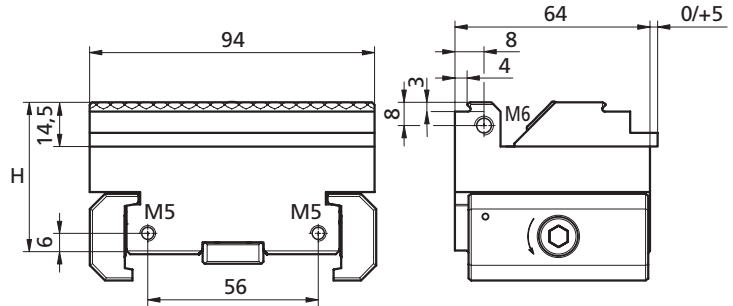
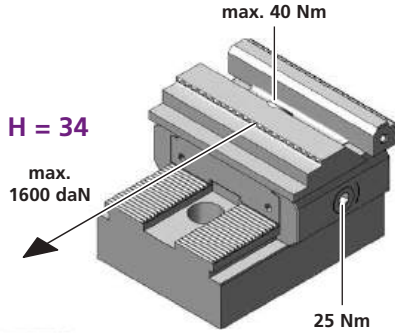
PS1P94L34-105

PS1P694L34-105

PS1P94L49-105

PS1PF94L49-105

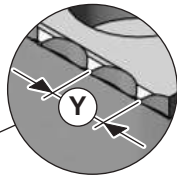
PS1PF94L34-105



PS1P94L34-105

- 1 1x TW100100-01
- 2 1x
- 3 1x PCSP60R
- 4 1x PCSP60L
- 5 1x PCS14
- 6 1x PCGU2059
- 7 1x M6X8ISO7380
- 8 2x M5X14ISO4762
- 9 2x PCD005
- 10 1x M8X28ISO4762
- 11 1x PCUSR16
- 12 2x M5X10ISO4762
- 13 1x PCKMR45M8
- 14 2x D=6 DIN 5401
- H = 34
- kg ~1,1

p. 84, 85



PS1P694L34-105

- 1 1x TW100100-02
- Y 6,0 mm
- kg ~1,1

PS1PF94L34-105

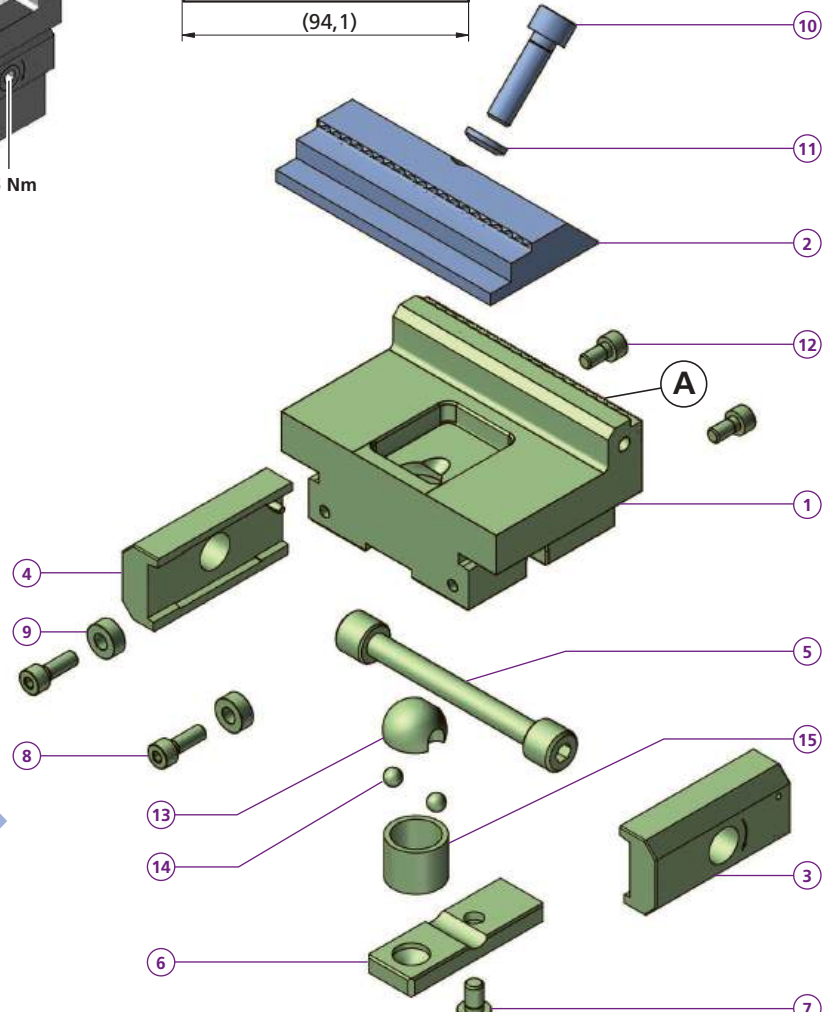
- 1 1x TK140782
- H = 49
- kg ~1,1

PS1P94L49-105

- 1 1x TK120857
- 15 1x PCD20L15
- H = 49
- kg ~1,8

PS1PF94L49-105

- 1 1x TK140783
- 15 1x PCD20L15
- H = 49
- kg ~1,8



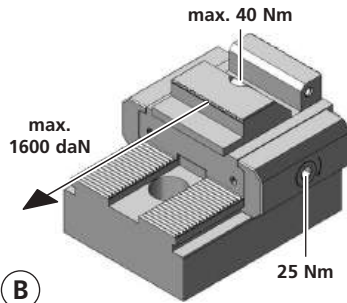
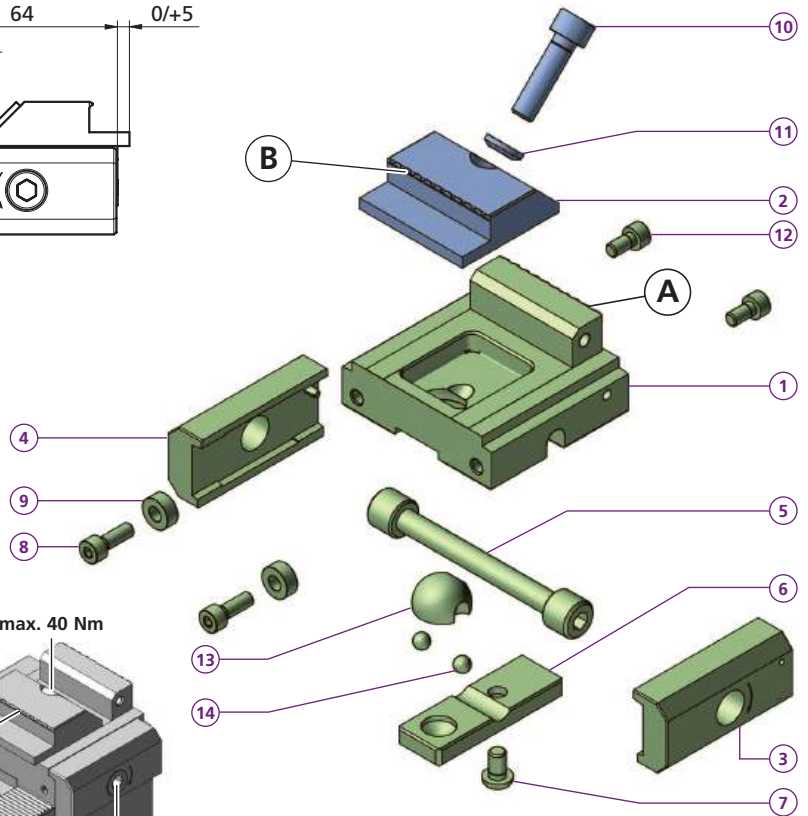
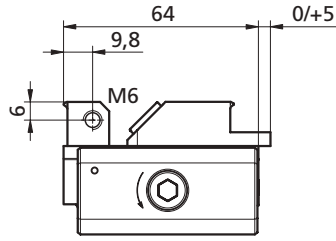
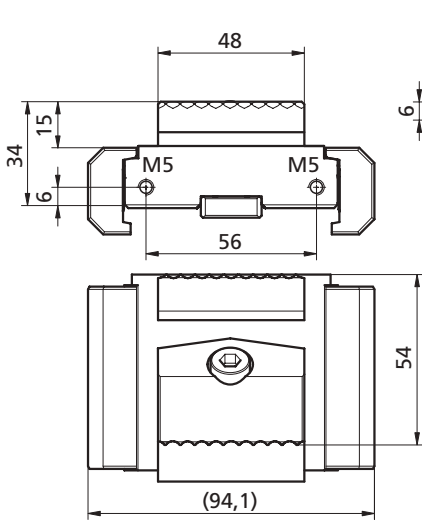
Bestellbeispiel / Ordering example:
1x PS1P94L34-105 & 1x B120

Drehmoment Torque		Spannkraft Workholding force		
Nm	(lb-ft)	~daN	~(lb)	~t
10	7,4	= 400	880	0,4
20	14,8	= 800	1'760	0,8
30	22,2	= 1'200	2'650	1,2
40	29,6	= 1'600	3'530	1,6

Separat bestellen / Order separately

PS1PV48L34-105
PS1R/F48L34-105

Linear
powerCLAMP

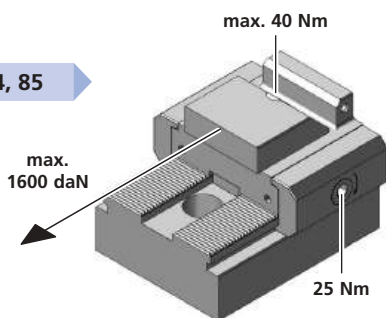
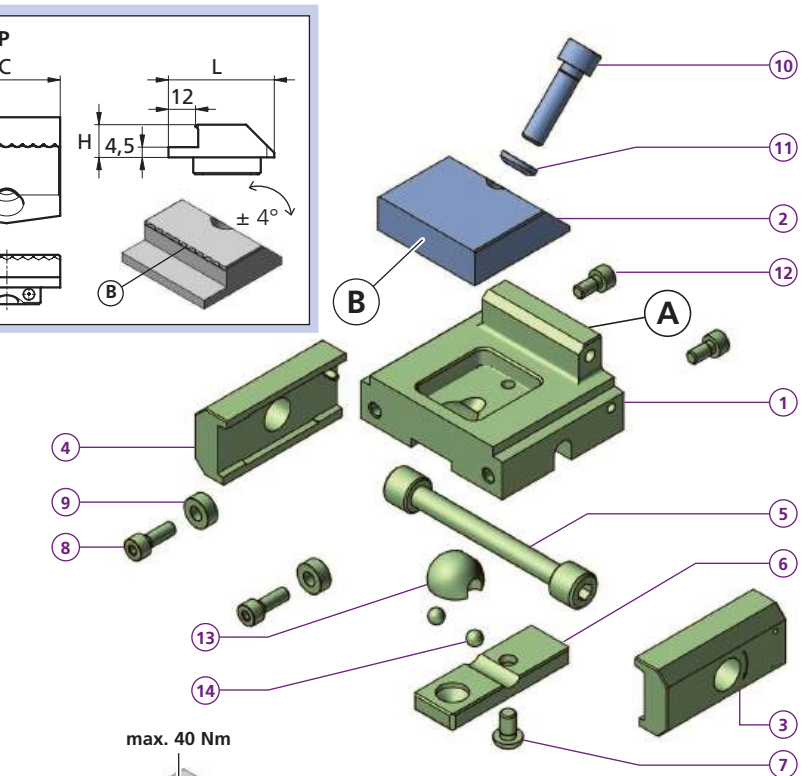


PS1PV48L34-105

1	1x	TK140762
2	1x	
3	1x	PCSP60R
4	1x	PCSP60L
5	1x	PCS14
6	1x	PCGU2059
7	1x	M6X8ISO7380
8	2x	M5X14ISO4762
9	2x	PCD005
10	1x	M8X28ISO4762
11	1x	PCUSR16
12	2x	M5X10ISO4762
13	1x	PCKMR45M8
14	2x	D=6 DIN 5401
kg		~1,0

B123P

C	48
H	14,5
L	47
i	56HRC
kg	~0,21



PS1R48L34-105

PS1F48L34-105

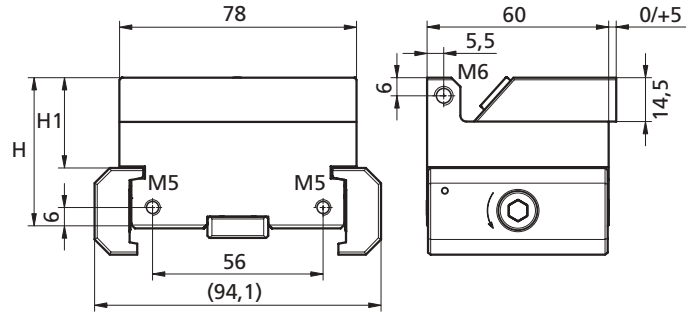
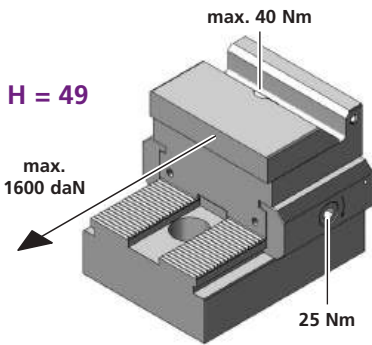
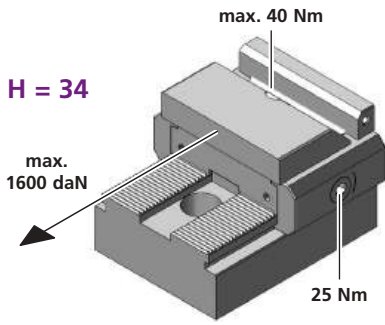
1	1x	TF140573
2	1x	
3	1x	PCSP60R
4	1x	PCSP60L
5	1x	PCS14
6	1x	PCGU2059
7	1x	M6X8ISO7380
8	2x	M5X14ISO4762
9	2x	PCD005
10	1x	M8X30ISO4762
11	1x	PCUSR14
12	2x	M5X10ISO4762
13	1x	PCKMR45M8
14	2x	D=6 DIN 5401
kg		~1,0

p. 84, 85

Bestellbeispiel / Ordering example:
1x PS1R48L34-105 & 1x B123P

Drehmoment Torque		Spannkraft Workholding force		
Nm	(lb-ft)	~daN	~(lb)	~t
10	7,4	= 400	880	0,4
20	14,8	= 800	1'760	0,8
30	22,2	= 1'200	2'650	1,2
40	29,6	= 1'600	3'530	1,6

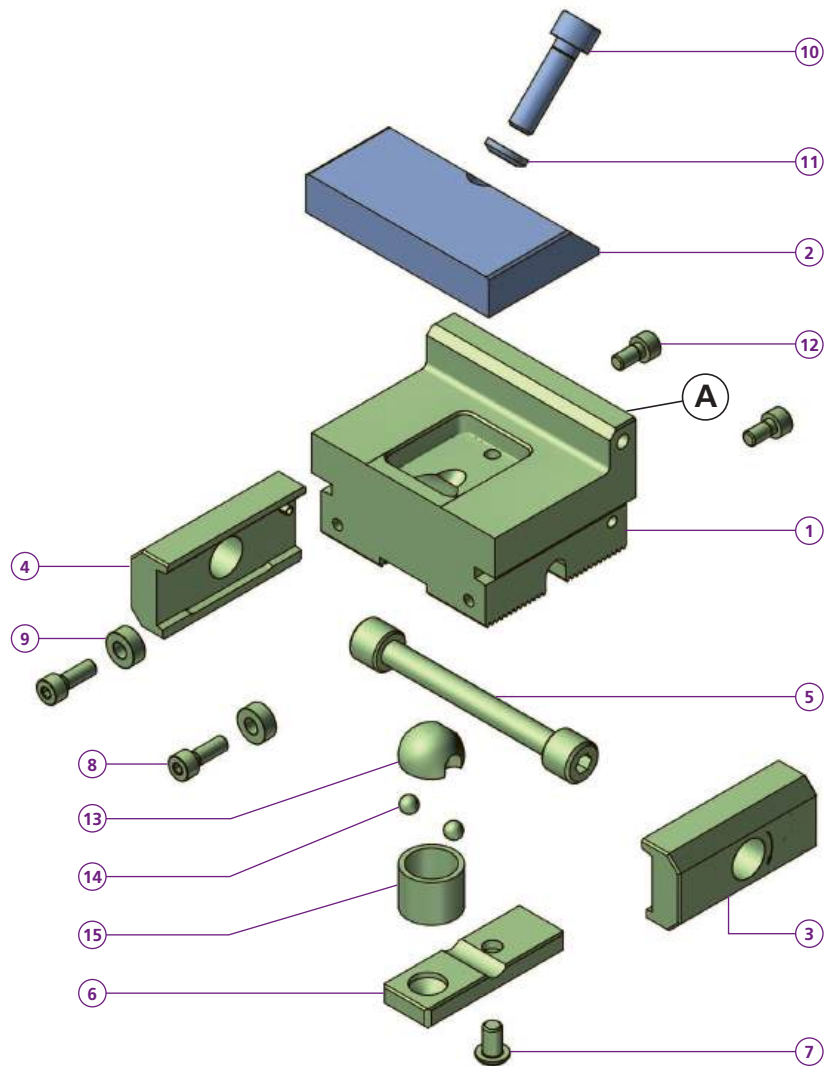
Separat bestellen / Order separately



- PS1R78L34-105**
- 1 1x TF140575
- PS1F78L34-105**
- 1 1x TF140574
 - 2 1x
 - 3 1x PCSP60R
 - 4 1x PCSP60L
 - 5 1x PCS14
 - 6 1x PCGU2059
 - 7 1x M6X8ISO7380
 - 8 2x M5X14ISO4762
 - 9 2x PCD005
 - 10 1x M8X30ISO4762
 - 11 1x PCUSR14
 - 12 2x M5X10ISO4762
 - 13 1x PCKMR45M8
 - 14 2x D=6 DIN 5401
- H = 34
H1 = 15
kg ~1,0

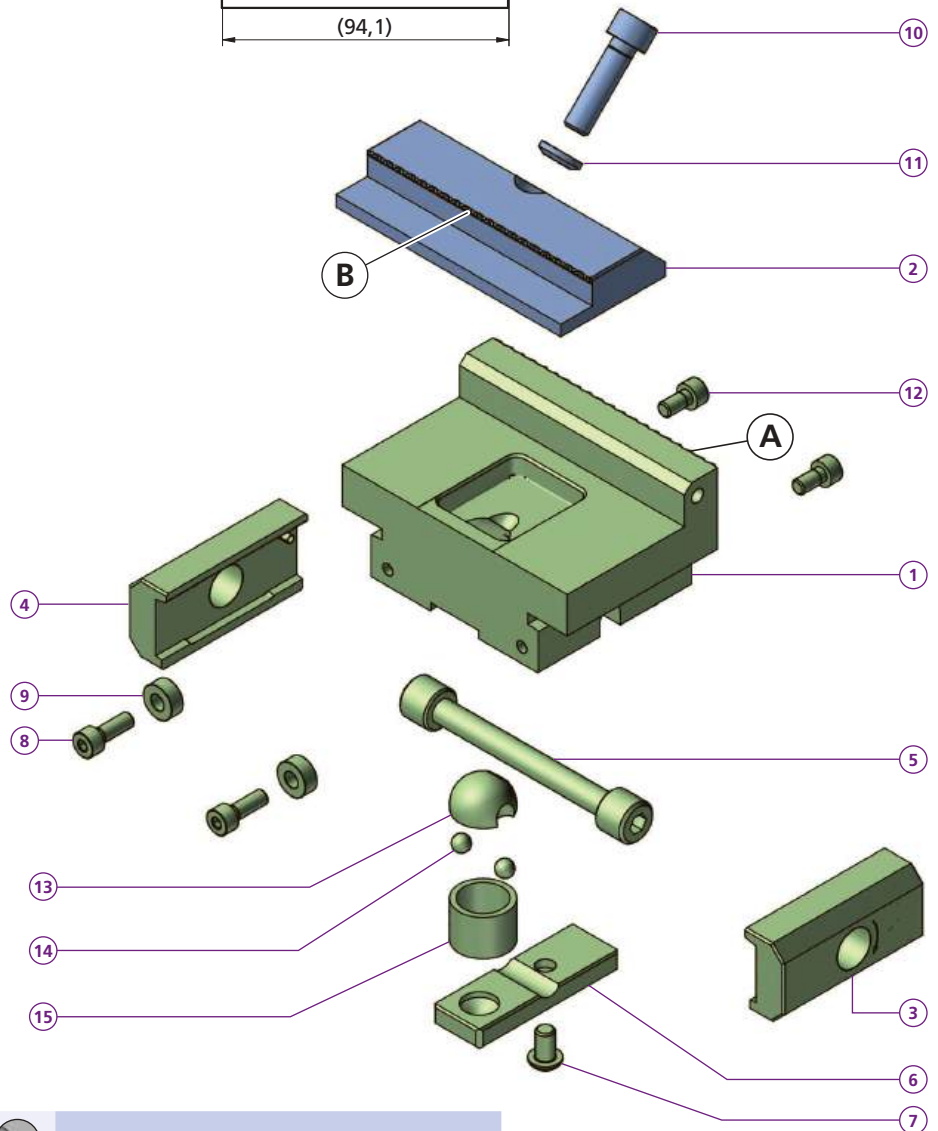
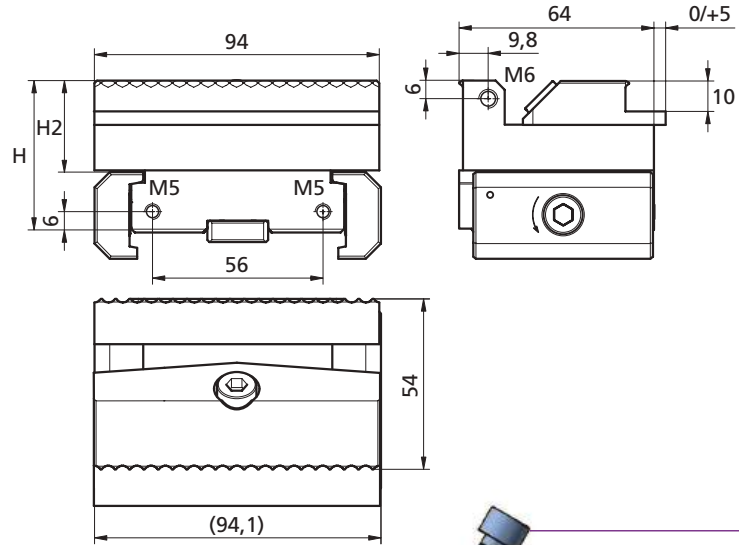
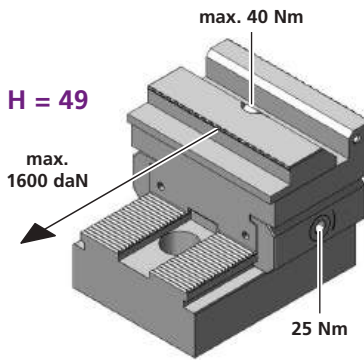
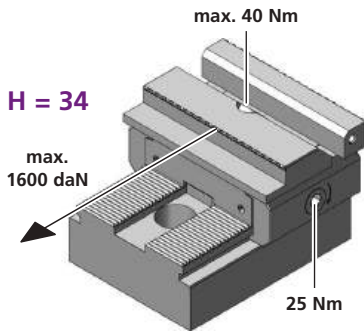
p. 84, 85

- PS1R78L49-105**
- 1 1x TK110399
 - 15 2x PCD20L15
- PS1F78L49-105**
- 1 1x TK110400
 - 15 2x PCD20L15
- H = 49
H1 = 30
kg ~1,5

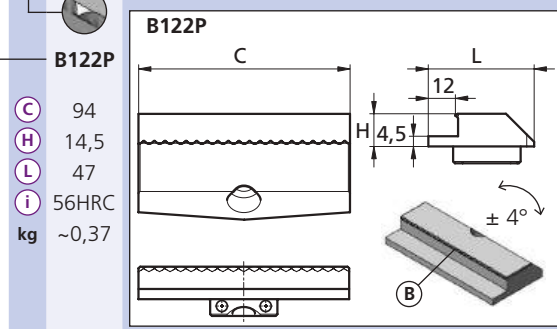


Bestellbeispiel / Ordering example:
1x PS1R48L34-105 & 1x B105

Drehmoment Torque		Spannkraft Workholding force		
Nm	(lb-ft)	~daN	~(lb)	~t
10	7,4	= 400	880	0,4
20	14,8	= 800	1'760	0,8
30	22,2	= 1'200	2'650	1,2
40	29,6	= 1'600	3'530	1,6



PS1PV94L34-105	
1	1x TK120230
2	1x
3	1x PCSP60R
4	1x PCSP60L
5	1x PCS14
6	1x PCGU2059
7	1x M6X8ISO7380
8	2x M5X14ISO4762
9	2x PCD005
10	1x M8X28ISO4762
11	1x PCUSR16
12	2x M5X10ISO4762
13	1x PCKMR45M8
14	2x D=6 DIN 5401
H	= 34
H1	= 15
kg	~1,1
PS1PV94L49-105	
1	1x TK110250
15	1x PCD20L15
H	= 49
H1	= 30
kg	~1,8

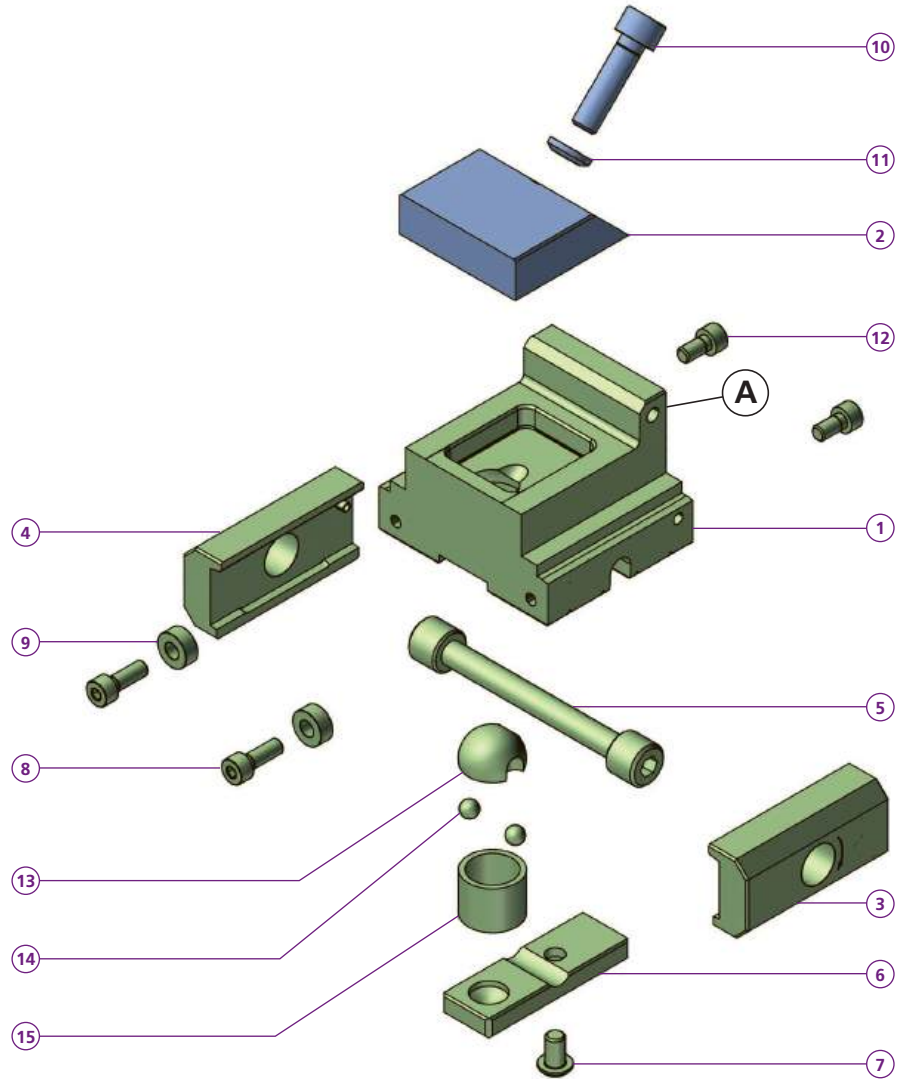
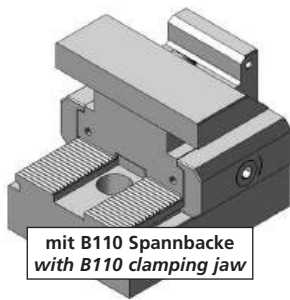
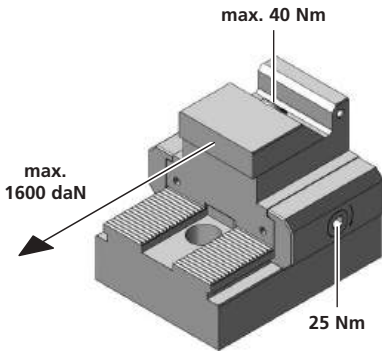
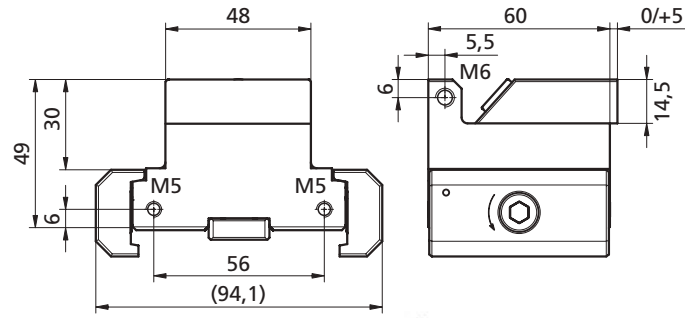
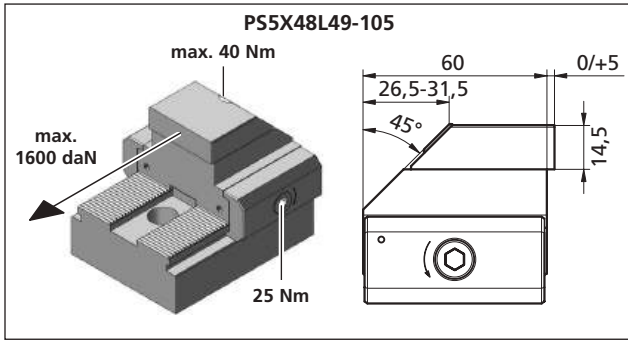


Bestellbeispiel / Ordering example:
1x PS1PV94L49-105 & 1x B122P

Drehmoment Torque		Spannkraft Workholding force		
Nm	(lb-ft)	~daN	~(lb)	~t
10	7,4	= 400	880	0,4
20	14,8	= 800	1'760	0,8
30	22,2	= 1'200	2'650	1,2
40	29,6	= 1'600	3'530	1,6

PS1R/F48L49-105
PS5X48L49-105

Linear 5axes
powerCLAMP



45°	PS5X48L49-105
1	1x TF190651
9	2x PCD005
8	2x M5X14ISO4762
kg	~1,2
	PS1F48L49-105
1	1x TF140673
	PS1R48L49-105
1	1x TF140672
2	1x
3	1x PCSP60R
4	1x PCSP60L
5	1x PCS14
6	1x PCGU2059
7	1x M6X8ISO7380
8	2x M5X14ISO4762
9	2x PCD005
10	1x M8X30ISO4762
11	1x PCUSR14
12	2x M5X10ISO4762
13	1x PCKMR45M8
14	2x D=6 DIN 5401
15	1x PCD20L15
kg	~1,3

p. 84, 85

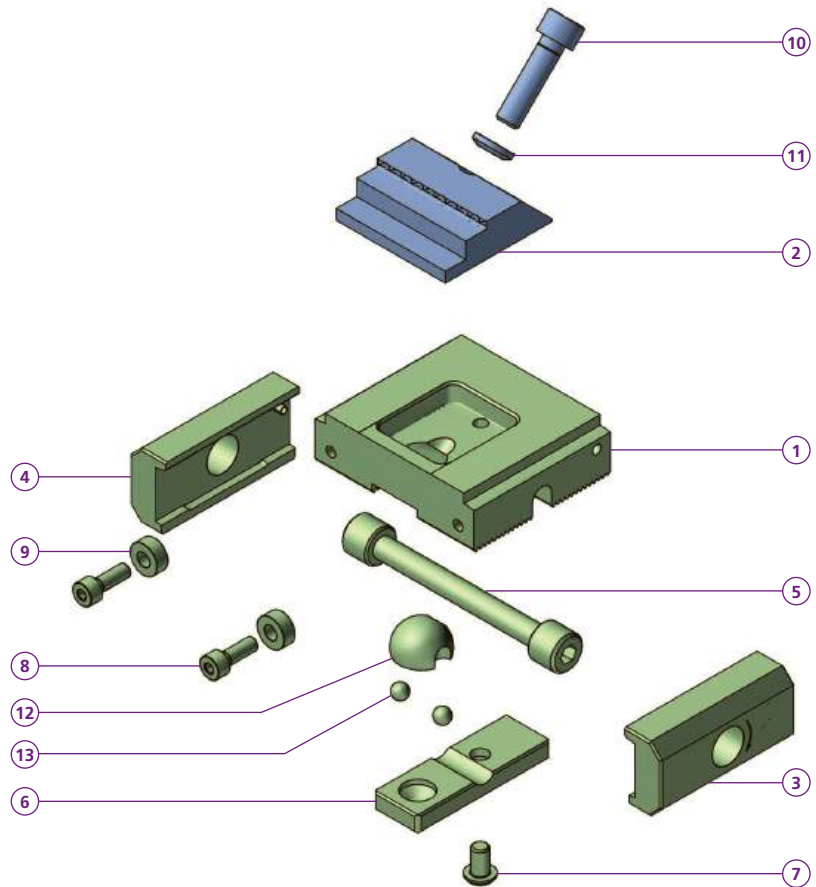
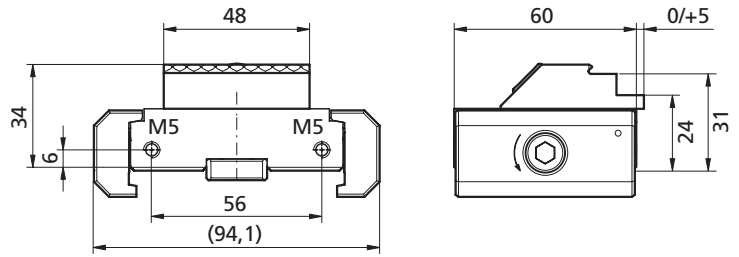
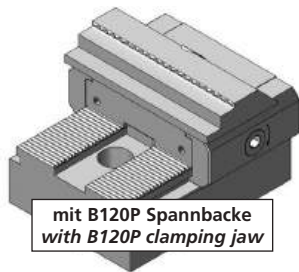
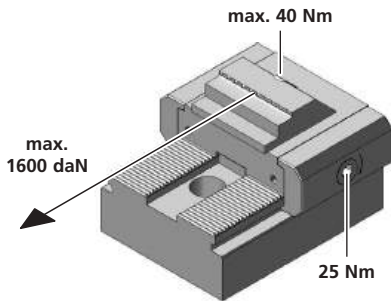


Bestellbeispiel / Ordering example:
1x PS1F48L49-105 & 1x B105

Nm	Drehmoment Torque		Spannkraft Workholding force		
	(lb-ft)		~daN	~(lb)	~t
10	7,4	=	400	880	0,4
20	14,8	=	800	1'760	0,8
30	22,2	=	1'200	2'650	1,2
40	29,6	=	1'600	3'530	1,6

Separat bestellen / Order separately

PS5X48L34-105



PS5X48L34-105

- ① 1x T00365
- ② 1x —————
- ③ 1x PCSP60R
- ④ 1x PCSP60L
- ⑤ 1x PCS14
- ⑥ 1x PCGU2059
- ⑦ 1x M6X8ISO7380
- ⑧ 2x M5X14ISO4762
- ⑨ 2x PCD005
- ⑩ 1x M8X28ISO4762
- ⑪ 1x PCUSR16
- ⑫ 1x PCKMR45M8
- ⑬ 2x D=6 DIN 5401

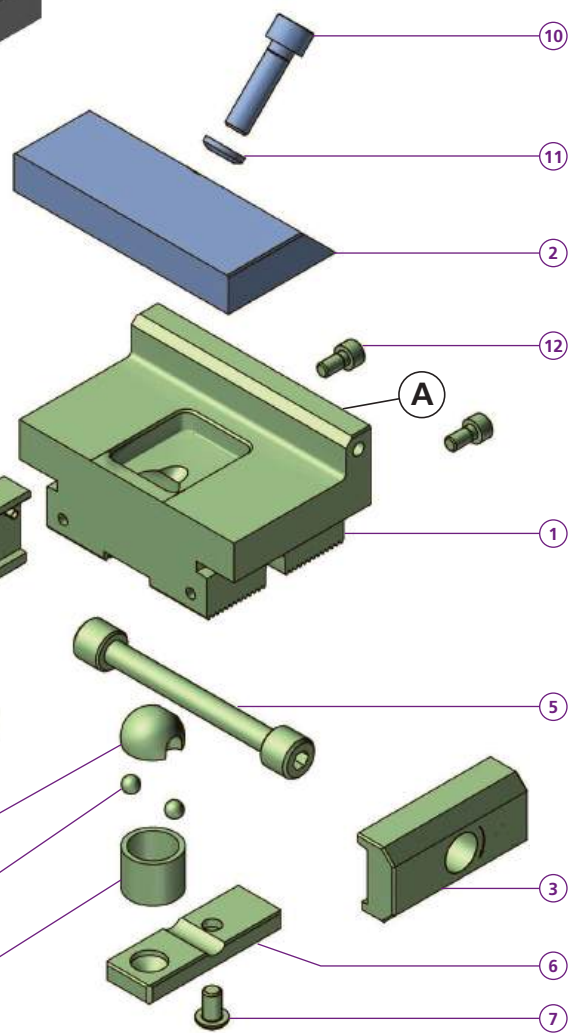
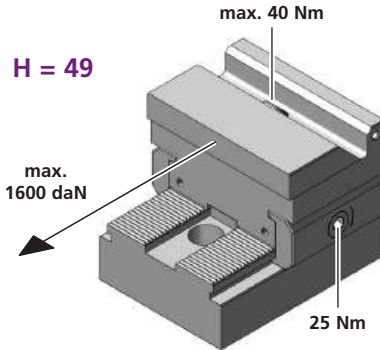
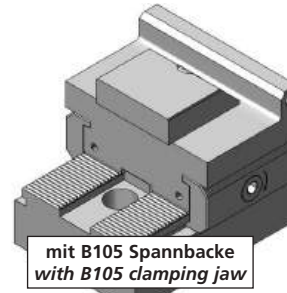
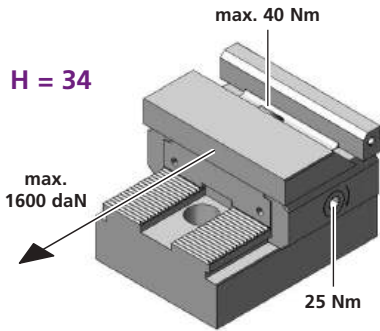
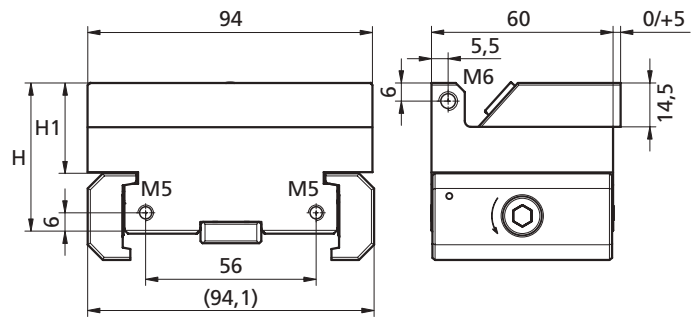
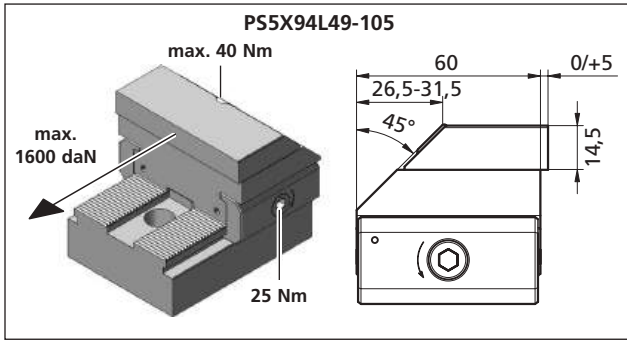
p. 84, 85

kg ~0,9

Bestellbeispiel / Ordering example:
1x PS5X48L34-105 & 1x B105

Drehmoment Torque		Spannkraft Workholding force		
Nm	(lb-ft)	~daN	~(lb)	~t
10	7,4	= 400	880	0,4
20	14,8	= 800	1'760	0,8
30	22,2	= 1'200	2'650	1,2
40	29,6	= 1'600	3'530	1,6

Separat bestellen / Order separately



- PS5X94L49-105**
- 1x TW100186
 - 2x PCD20L15
 - 2x PCD005
 - 2x M5X14ISO4762
 - kg ~1,5
- PS1F94L34-105**
- 1x TH130785
- PS1R94L34-105**
- 1x TH130786
 - 1x **2**
 - 1x PCSP60R
 - 1x PCSP60L
 - 1x PCS14
 - 1x PCGU2059
 - 1x M6X8ISO7380
 - 2x M5X14ISO4762
 - 2x PCD005
 - 1x M8X30ISO4762
 - 1x PCUSR14
 - 2x M5X10ISO4762
 - 1x PCKMR45M8
 - 2x D=6 DIN 5401
 - H = 34
 - H1 = 15
 - kg ~1,0

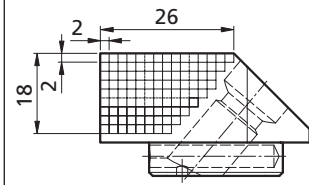
p. 84, 85

- PS1F94L49-105**
- 1x TF140674
 - 2x PCD20L15
- PS1R94L49-105**
- 1x TF140675
 - 2x PCD20L15
 - H = 49
 - H1 = 30
 - kg ~1,7

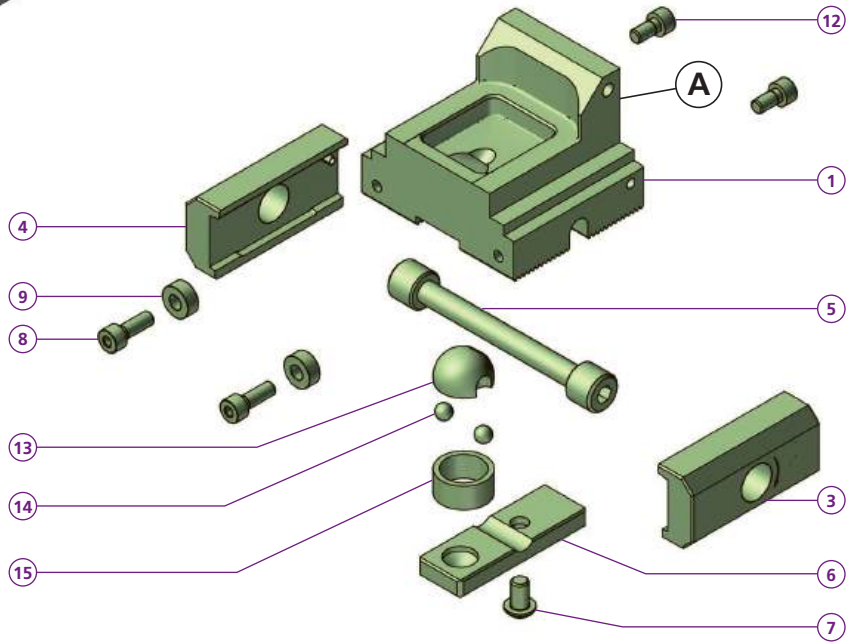
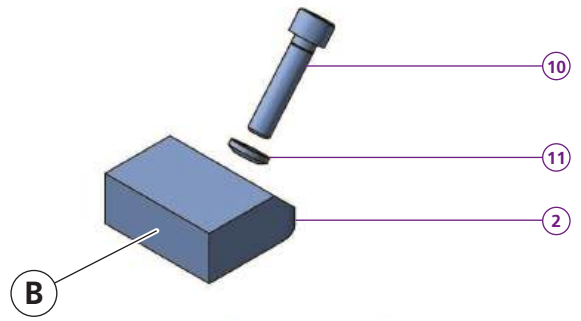
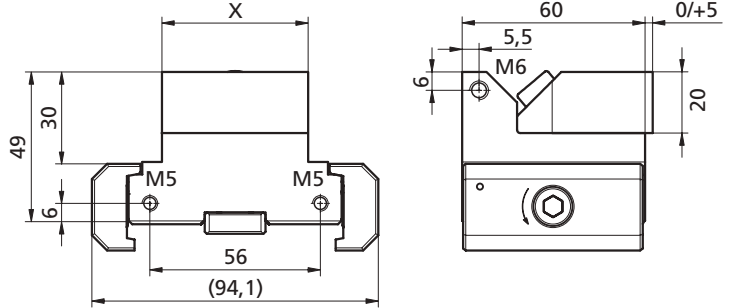
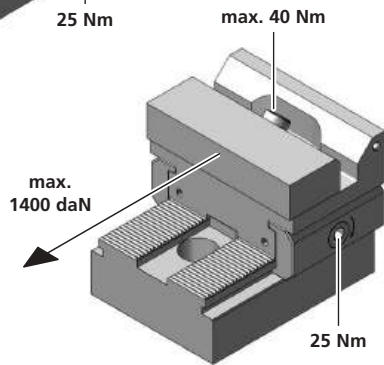
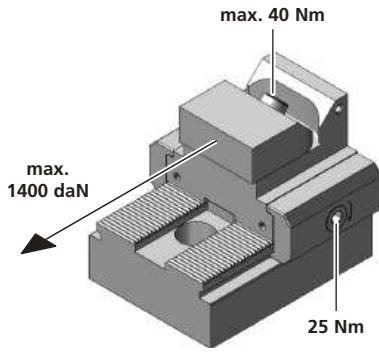
Bestellbeispiel / Ordering example:
1x PS1R94L49-105 & 1x B105

Drehmoment Torque	Spannkraft Workholding force		
	Nm (lb-ft)	~daN	~(lb) ~t
10	7,4 =	400	880 0,4
20	14,8 =	800	1'760 0,8
30	22,2 =	1'200	2'650 1,2
40	29,6 =	1'600	3'530 1,6

Separat bestellen / Order separately



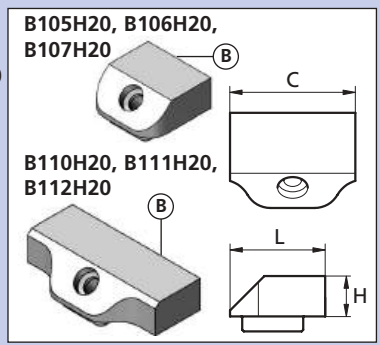
Zum Erstellen Ihrer individuellen Formbacke: *If a dedicated jaw is being machined:*
 Schnittzeichnung zum Ermitteln der maximalen Bearbeitungsprofiltiefe
Sectional drawing to determine the maximum machining depth



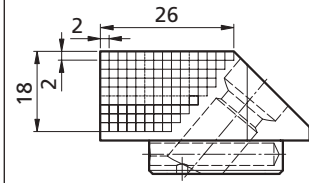
PS1R48L49-105H20	
1	1x TW100161-01
2	1x
3	1x PCSP60R
4	1x PCSP60L
5	1x PCS14
6	1x PCGU2059
7	1x M6X8ISO7380
8	2x M5X14ISO4762
9	2x PCD005
10	1x M8X35ISO4762
11	1x PCUSR14
12	2x M5X10ISO4762
13	1x PCKMR45M8
14	2x D=6 DIN 5401
15	1x PCD20L095
X	= 48
kg	~1,2
PS1R94L49-105H20	
1	1x TW100161-07
X	= 94
kg	~1,5

Bestellbeispiel / Ordering example: 1x PS1R48L49-105H20 & 1x B107H20

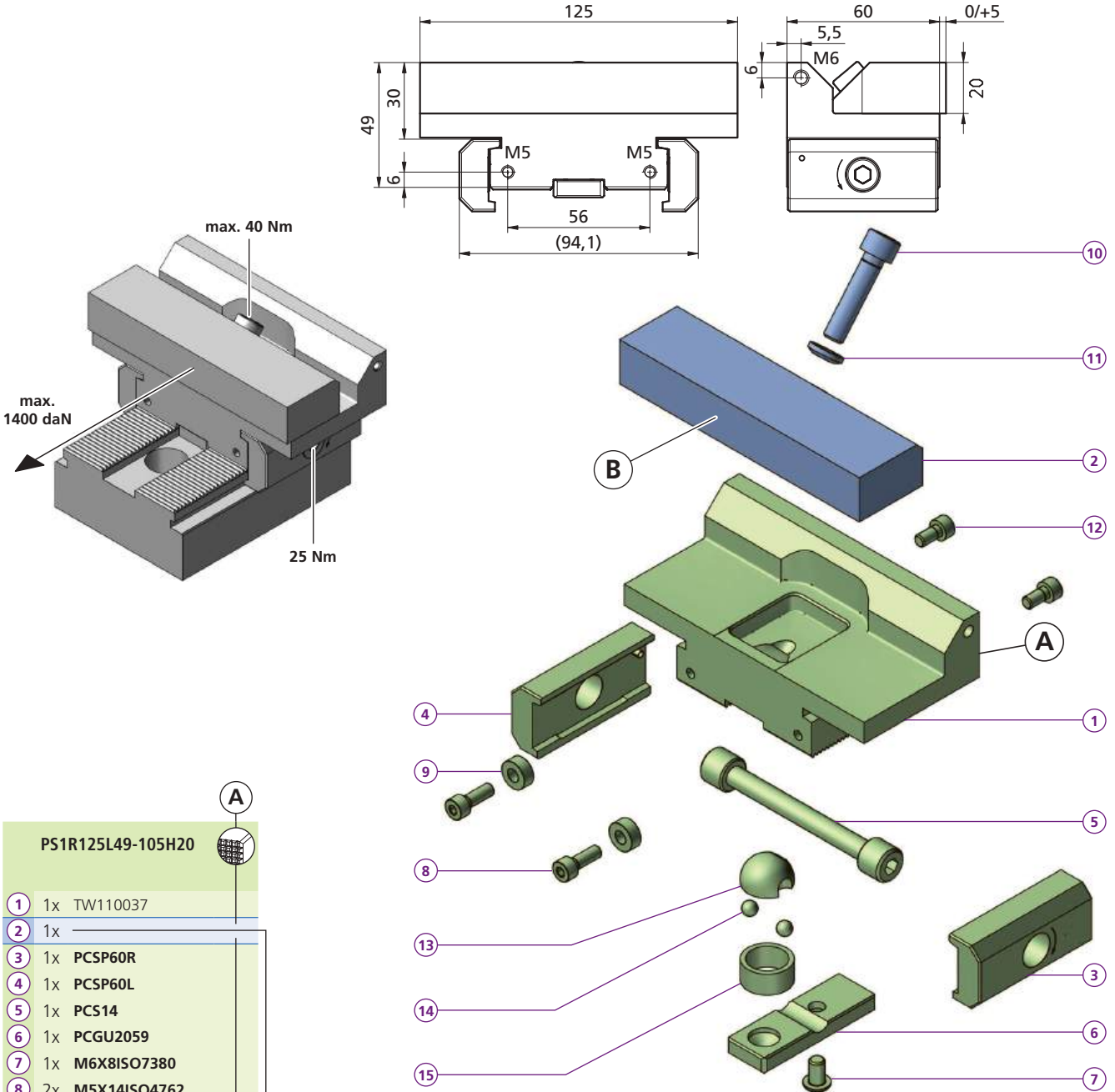
	B105H20	B106H20	B107H20	B110H20	B111H20	B112H20
C	48	48	48	94	94	94
H	20	20	20	20	20	20
L	47	47	47	47	47	47
i	HV700 x0,2mm	HV700 x0,2mm	*	HV700 x0,2mm	HV700 x0,2mm	*
kg	~0,38	~0,38	~0,38	~0,57	~0,56	~0,56



Separat bestellen / Order separately



Zum Erstellen Ihrer individuellen Formbacke: *If a dedicated jaw is being machined:*
 Schnittzeichnung zum Ermitteln der maximalen Bearbeitungsprofiltiefe
Sectional drawing to determine the maximum machining depth



PS1R125L49-105H20	
1	1x TW110037
2	1x
3	1x PCSP60R
4	1x PCSP60L
5	1x PCS14
6	1x PCGU2059
7	1x M6X8ISO7380
8	2x M5X14ISO4762
9	2x PCD005
10	1x M8X35ISO4762
11	1x PCUSR14
12	2x M5X10ISO4762
13	1x PCKMR45M8
14	2x D=6 DIN 5401
15	1x PCD20L095
kg	~1,7
PS1F125L49-105H20	
1	1x TH150895
X	= 125
kg	~1,7

Bestellbeispiel / Ordering example: 1x PS1R125L49-105H20 & 1x B132H20P

	B130H20P	B131H20P	B132H20P
C	125	125	125
H	20	20	20
L	47	47	47
i	HV700 x0,2mm	HV700 x0,2mm	*
kg	~0,71	~0,71	~0,71

B130H20P, B131H20P, B132H20P

* = weicher Stahl / soft steel



zum Einsatz in unterschiedlichen Spannsituationen
for use in different clamping situations

Art. Nr.				kg
B110	HV700 x 0,2mm			~0,49
B110P	HV700 x 0,2mm	$\pm 4^\circ$		~0,49



mit Prägeeinsätzen
with direct-stamping inserts

Art. Nr.			kg
B110P-PRGM8	HV700 x 0,2mm		~0,46

Art. Nr.			kg
B111	HV700 x 0,2mm		~0,48
B111P	HV700 x 0,2mm	$\pm 4^\circ$	~0,48

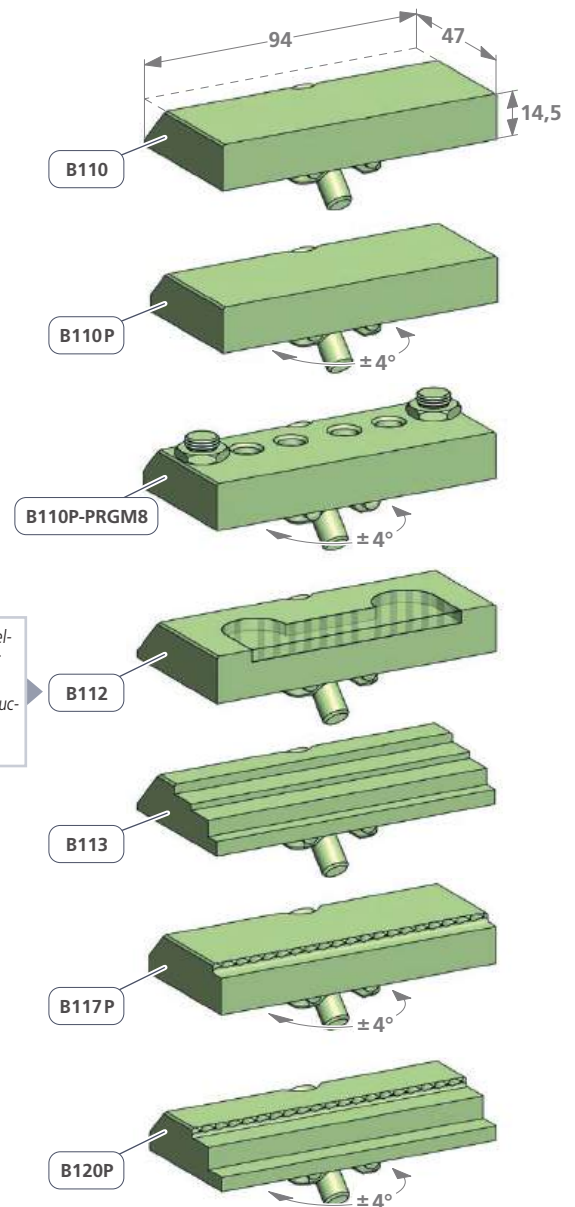
B112	weicher Stahl soft steel (1.2312)		~0,49
B112P	weicher Stahl soft steel (1.2312)	$\pm 4^\circ$	~0,49
B112HG	Hochgenau High-precision		~0,49
B112E	Einsatzstahl (1.5752) Case hardening steel		~0,49
B112EP	Einsatzstahl (1.5752) Case hardening steel	$\pm 4^\circ$	~0,47

B113	HV700 x 0,2mm		~0,39
B113P	HV700 x 0,2mm	$\pm 4^\circ$	~0,39

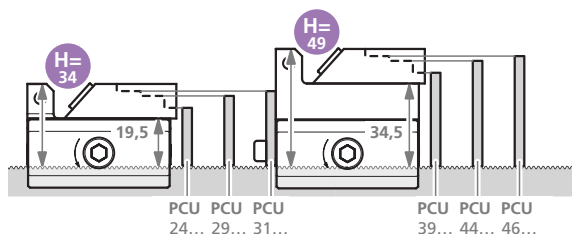
B117P	57HRC	$\pm 4^\circ$	~0,46
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B120	57HRC		~0,4
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B120P	57HRC	$\pm 4^\circ$	~0,4
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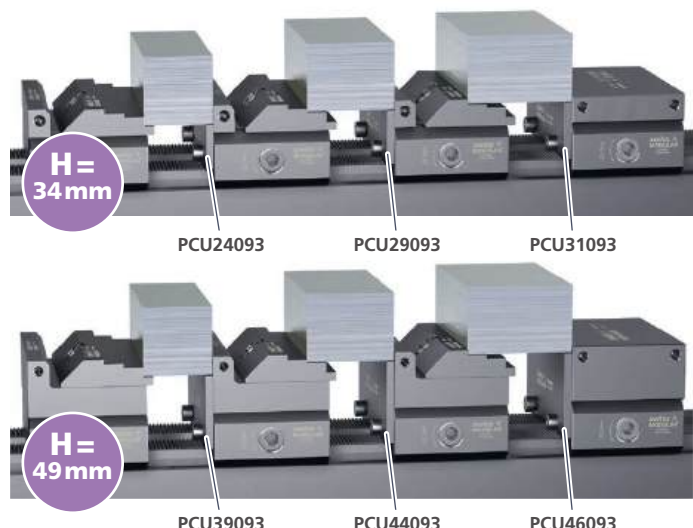
Modulhöhen / Module heights 34 / 49 mm



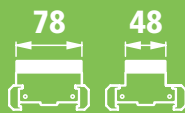
Beim Einsatz einer Stufenbacke, ist die richtige Modulspannhöhe 34 mm / 49 mm zu berücksichtigen. Die Werkstücke auf der Anschlagseite werden mit den passenden Parallelunterlagen abgestützt.

When using a step jaw is applied, the correct module clamping height 34 mm / 49 mm must be taken into account. The workpieces on the end module are supported with the appropriate steel parallel.

Eingesetzte Stufenbacken / Inserted stepped jaws (B113)



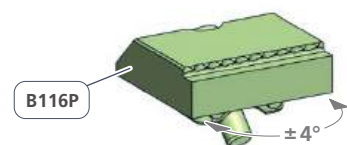
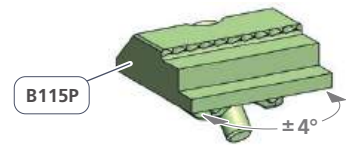
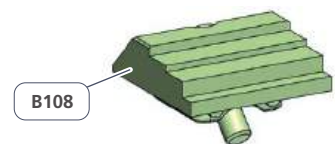
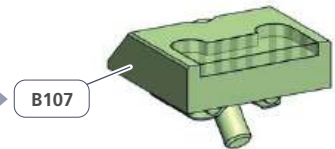
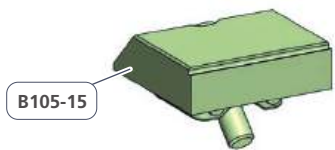
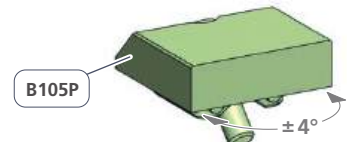
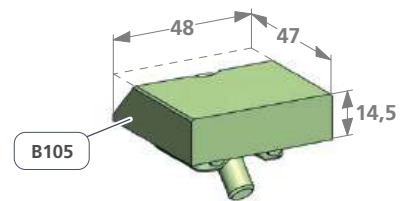
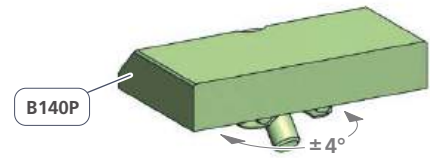
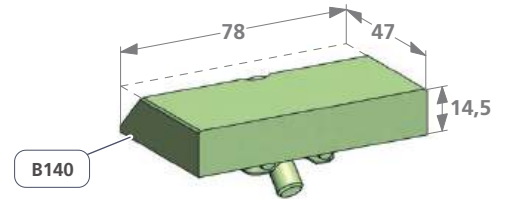
Linear- Spannbacken ... Linear clamping jaws ...



powerCLAMP

zum Einsatz in unterschiedlichen Spannsituationen
for use in different clamping situations

Art.Nr.				kg
B140	HV700 x 0,2mm			~0,41
B140P	HV700 x 0,2mm	$\pm 4^\circ$		~0,41
B141	HV700 x 0,2mm			~0,41
B141P	HV700 x 0,2mm	$\pm 4^\circ$		~0,41
B105	HV700 x 0,2mm			~0,27
B105P	HV700 x 0,2mm	$\pm 4^\circ$		~0,27
B105-15	HV700 x 0,2mm			~0,27
B106	HV700 x 0,2mm			~0,27
B106P	HV700 x 0,2mm	$\pm 4^\circ$		~0,27
B107	weicher Stahl soft steel (1.2312)			~0,27
B107P	weicher Stahl soft steel (1.2312)	$\pm 4^\circ$		~0,27
B108	HV700 x 0,2mm			~0,22
B108P	HV700 x 0,2mm	$\pm 4^\circ$		~0,22
B115	57HRC			~0,21
B115P	57HRC	$\pm 4^\circ$		~0,21
B116P	57HRC	$\pm 4^\circ$		~0,25



Weich, zur Herstellung individueller Formbacke.
Soft, for the production of individual moulding jaw.

Für Prägebacken / For stamping jaws

PF-SET Kräftehaltung mit Nachfederung
Spring loaded mechanism to maintain clamping force

Bei allen Prägebacken kann die Kräftehaltung mit den nachfedernden Tellerfedern eingesetzt werden um ein Freiwigeln des Werkstücks zu verhindern.

On every spring loaded stamping jaw, the force retention with the disc springs can be used to prevent the workpiece from wiggling free.

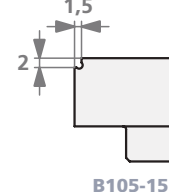
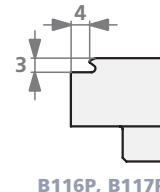
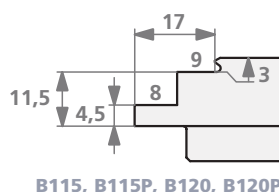
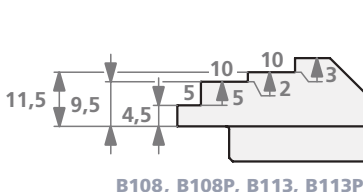


Die Tellerfedern werden gegenläufig montiert.

The disc springs are mounted in opposite directions.



Detailvermessung der Stufenbacken / Detailed dimensioning of the stepped jaws



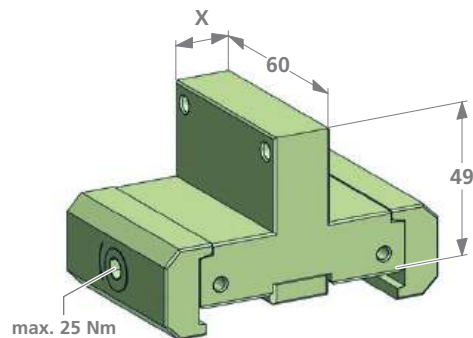
Anschlagmodule ... End module ...



5axes powerCLAMP

für die horizontale und vertikale Bearbeitung
for horizontal and vertical machining

Art. Nr.	kg	X
PAND19-49	~1,2	19
PAND26-49	~1,3	26
PAND34-49	~1,4	34



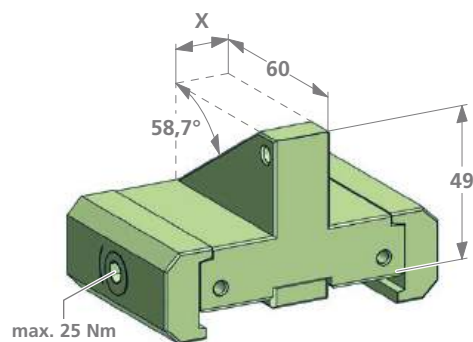
Schmale Anschlagmodule und Werkstücke
in der Mehrfachspannung.

Slim stop modules and workpieces in
multiple clamping.



für 5-Achs Bearbeitung
for 5-axis machining

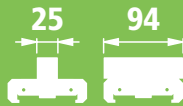
Art. Nr.	kg	X
PA5X19-49F	~1,1	19
PA5X19-49R	~1,1	19
PA5X26-49F	~1,1	26
PA5X26-49R	~1,1	26
PA5X34-49F	~1,2	34
PA5X34-49R	~1,2	34



Module
einsetzbar auf
Zentrischspannern
oder Basisschienen.
Modules
can be used on self
centrig vises or
base rails.



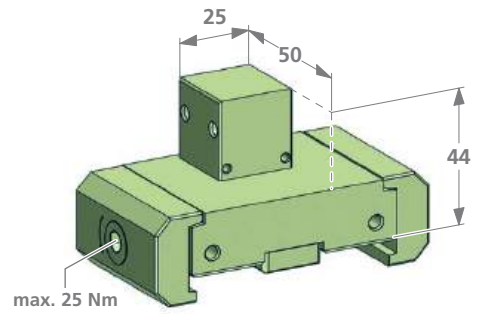
Anschlagmodule ...
End module ...



powerCLAMP

für die horizontale und vertikale Bearbeitung
for horizontal and vertical machining

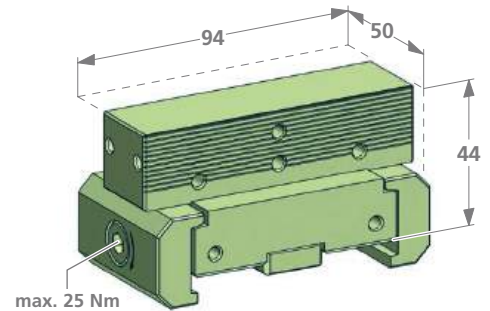
Art. Nr.	kg
PAND25-44	~0,9



Schlankes und kurzes Anschlagmodul für Kleinteil-Serien (Mehrfachspannung).

Slim and short end module for small part series (Multiple workholding).

Art. Nr.	kg
PAND94-44	~1,3



Die Anschlagfläche enthält 2 Passbohrungen. Mit MS50 Passschrauben kann mittig ein Seitenanschlag präzise platziert werden.

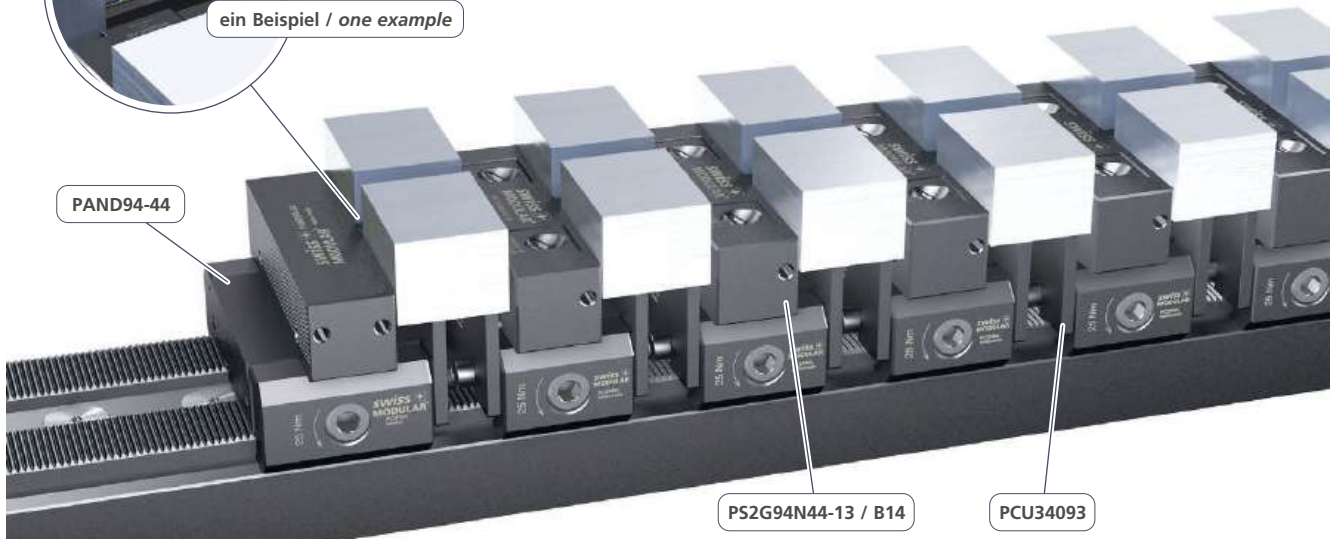
The stop surface contains 2 fitting holes. A side stop can be placed precisely in the centre with MS50 fitting screws.

Anschlagmodul mit Doppelspannfunktion. Verdoppelt die Anzahl Spannbereiche auf gleichbleibendem Raum.

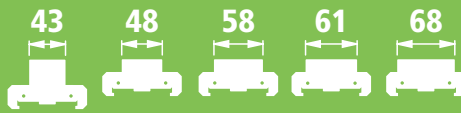
End module with double clamping function. Doubles the number of clamping areas in the same amount of working space.



ein Beispiel / one example



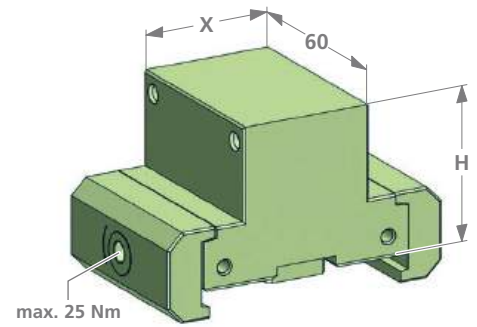
Anschlagmodule ...
End module ...



5axes
powerCLAMP

für die horizontale und vertikale Bearbeitung
for horizontal and vertical machining

Art. Nr.		kg	X	H
PAND43-49		~1,6	43	49
PAND48-34		~1,3	48	34
PAND48-49		~1,6	48	49
PAND48-75		~2,2	48	75
PAND58-34		~1,4	58	34
PAND58-49		~1,8	58	49
PAND61-34		~1,4	61	34
PAND68-34		~1,4	68	34



43 mm bis 68 mm breite Anschlagmodule für die Einzel- und Mehrfachspannung.
43 mm to 68 mm wide end modules for single and multiple clamping.

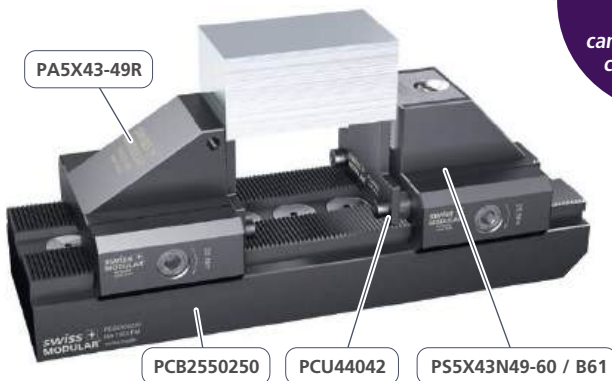
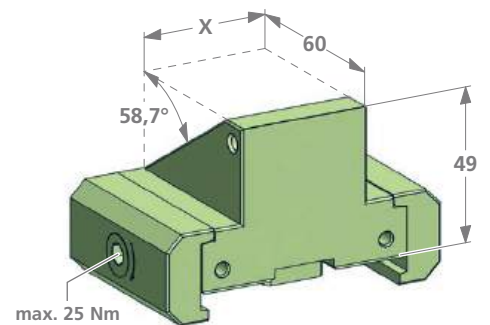


für 5-Achs Bearbeitung
for 5-axis machining

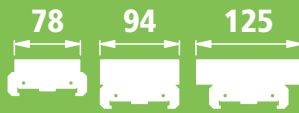
Art. Nr.		kg	X
PA5X43-49F		~1,3	43
PA5X43-49R		~1,3	43
PA5X48-49F		~1,4	48
PA5X48-49R		~1,4	48



Module einsetzbar auf Zentrischspannern oder Basisschienen.
Modules can be used on self centrig vises or base rails.



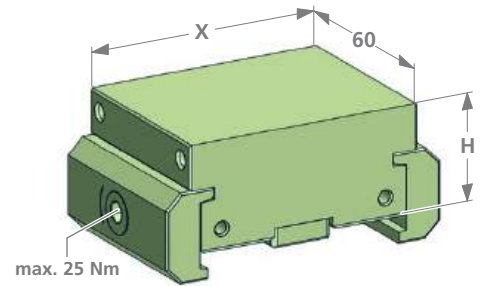
Anschlagmodule ... End module ...



5axes powerCLAMP

für die horizontale und vertikale Bearbeitung
for horizontal and vertical machining

Art. Nr.	kg	X	H
PAND78-34	~1,5	78	34
PAND78-49	~2,1	78	49
PAND94-34	~1,6	94	34
PAND94-49	~2,3	94	49
PAND125-49	~2,7	125	49



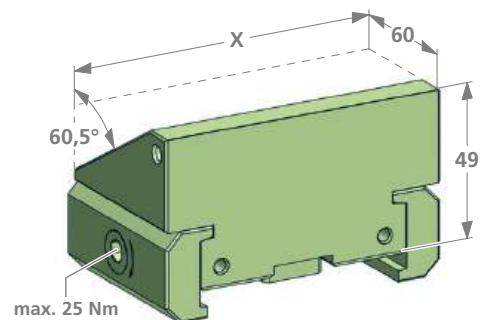
78 mm bis 125 mm breite Anschlagmodule
für die Einzel- und Mehrfachspannung.

78 mm to 125 mm wide end modules for
single and multiple clamping.



für 5-Achs Bearbeitung
for 5-axis machining

Art. Nr.	kg	X
PA5X94-49F	~1,8	94
PA5X94-49R	~1,8	94
PA5X125-49F	~2,0	125
PA5X125-49R	~2,0	125



Module
einsetzbar auf
Zentrischspannern
oder Basisschienen.
Modules
can be used on self
centrig vises or
base rails.



PAND48-34PRG/F-A1

PAND48-49PRG/F-A1

PAND94-34PRG/F-A1




PAND94-49PRG/F-A1




PAND125-49PRG-A1



5axes

powerCLAMP

PAND48-34PRG-A1   

PAND48-34PRF-A1   

1 1x TH120684

1 1x TK140239

3 1x PCSP60R

4 1x PCSP60L

5 1x PCS14

6 1x PCGU2049

7 1x M6X8ISO7380

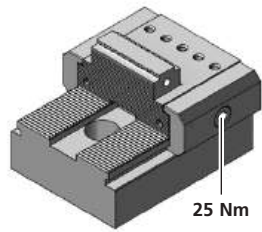
12 4x M5X10ISO4762

X = 48

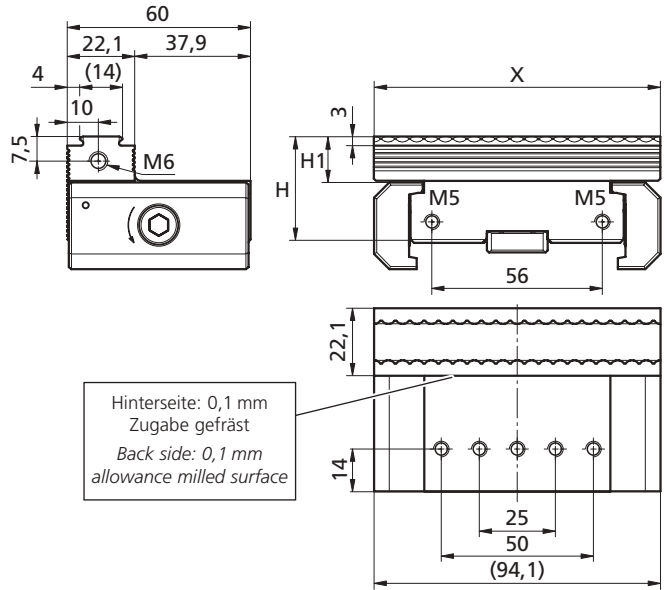
H = 34




H1 = 15




kg ~1,1



25 Nm



PAND48-49PRG-A1   

PAND48-49PRF-A1   

1 1x TH120685

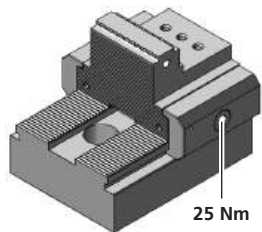
1 1x TK140597

X = 48

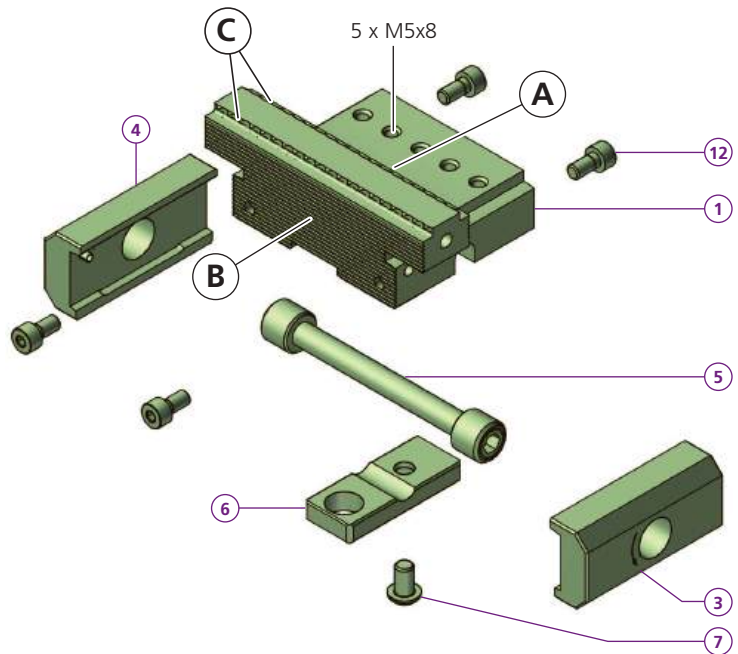
H = 49




H1 = 30




kg ~1,3



25 Nm



PAND94-34PRG-A1   

PAND94-34PRF-A1   

1 1x TH120686

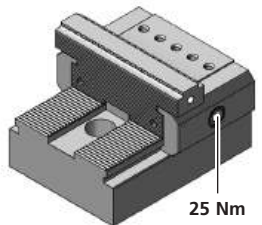
1 1x TH140185

X = 94




H = 34




H1 = 15

kg ~1,2



25 Nm

PAND94-49PRG-A1   

PAND94-49PRF-A1   

1 1x TH120687

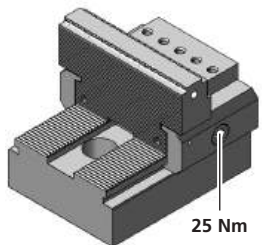
1 1x TH130754

X = 94




H = 49

H1 = 30

kg ~1,6



25 Nm

PAND125-49PRG-A1   

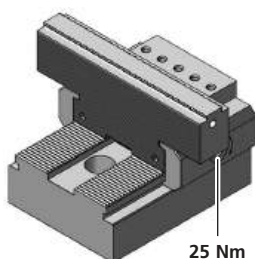
1 1x TB160295

X = 125

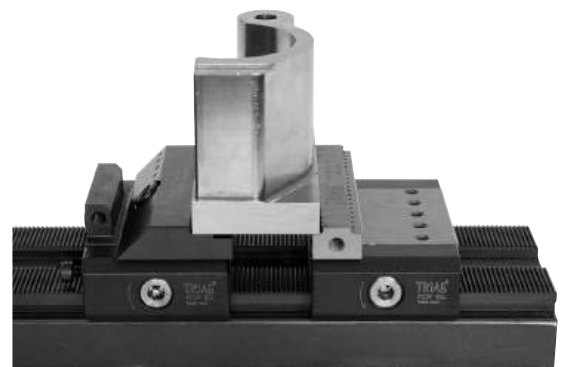
H = 49

H1 = 30

kg ~1,7



25 Nm



Bestellbeispiel / Ordering example: PAND94-34PRG-A1

PAND125-34PRG-A1

PAND150-34PRG-A1

PAND94-34PRGV

PAND94-49PRGV

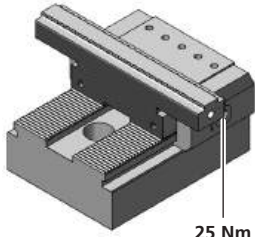


prägen
stamping

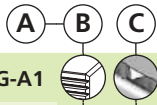
5axes

powerCLAMP

X = 125



25 Nm



PAND125-34PRG-A1

1 1x TB180899

X = 125

kg ~1,2

PAND150-34PRG-A1

1 1x TB160145

3 1x PCSP50R

4 1x PCSP50L

5 1x PCS14

6 1x PCGU2049

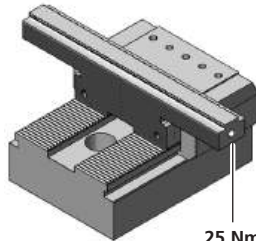
7 1x M6X8ISO7380

12 4x M5X10ISO4762

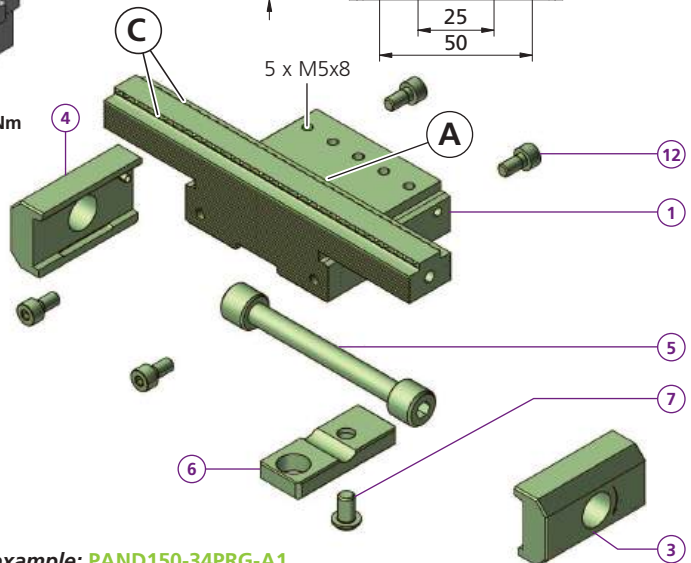
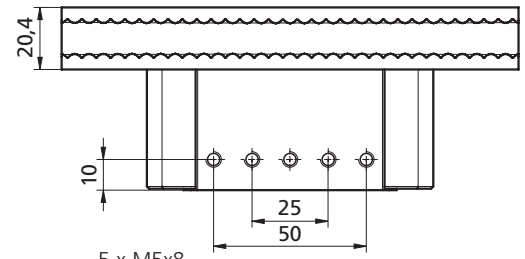
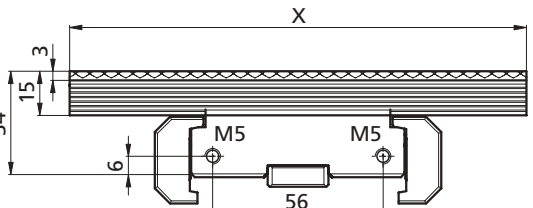
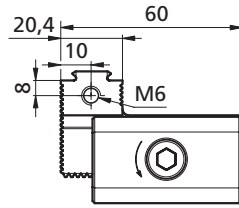
X = 150

kg ~1,2

X = 150

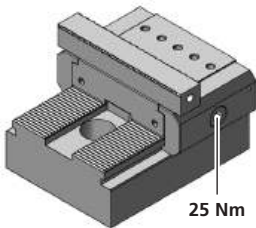


25 Nm



Bestellbeispiel / Ordering example: PAND150-34PRG-A1

H = 34



25 Nm



PAND94-34PRGV

1 1x TH171180

3 1x PCSP60R

4 1x PCSP60L

5 1x PCS14

6 1x PCGU2049

7 1x M6X8ISO7380

12 4x M5X10ISO4762

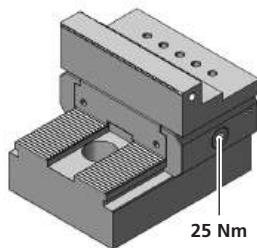
H = 34

H1 = 15

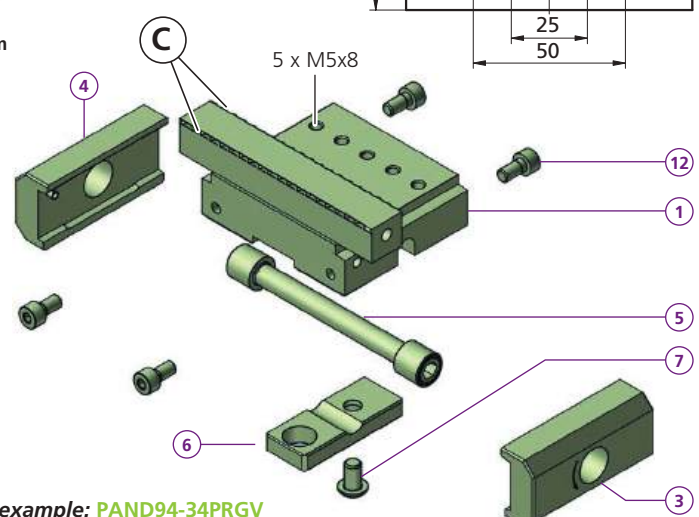
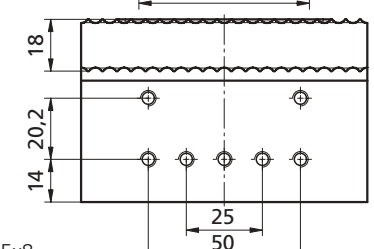
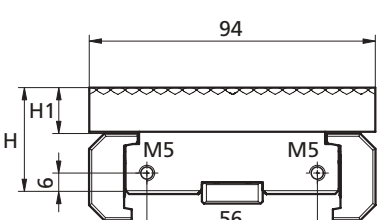
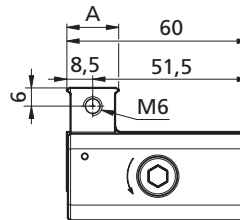
A = 17,5

kg ~1,2

H = 49



25 Nm



Bestellbeispiel / Ordering example: PAND94-34PRGV

PAND94-49PRGV

1 1x TH171179

H = 49

H1 = 30

A = 17







kg ~1,6

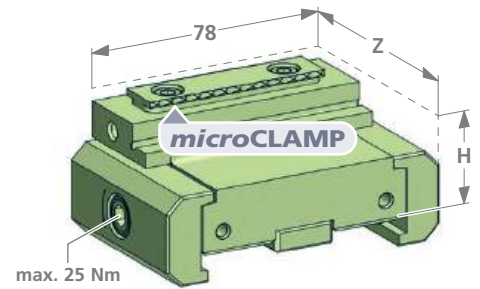
Anschlagmodule zum Prägen ... End modules for stamping ...



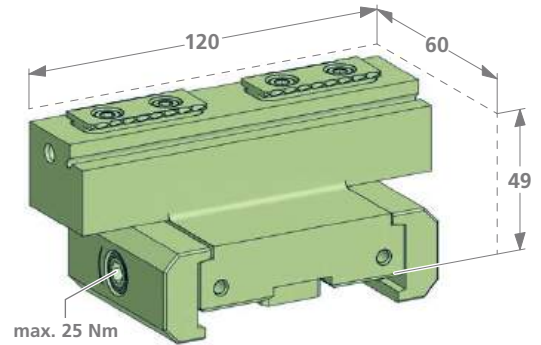
**5axes
powerCLAMP**

für die horizontale und vertikale Bearbeitung
for horizontal and vertical machining

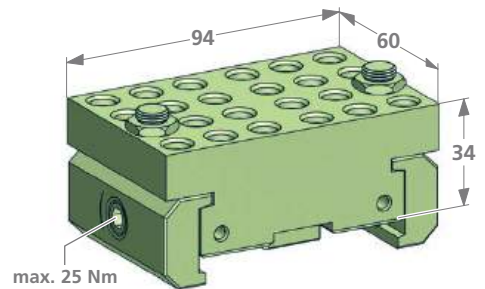
Art. Nr.		kg	Z	H
PAND78-34UPRG	 	~1,2	60	34
PAND78-49UPRG	 	~1,5	60	49
PAND78-34X50UPRG	 	~1,0	50	34



Art. Nr.	kg
PAND120-49UPRG	~1,8



Art. Nr.	kg
PANF94-34PRGM8	~1,5



Module einsetzbar auf Zentrischspannern oder Basisschienen.

Modules can be used on self centrig vises or base rails.

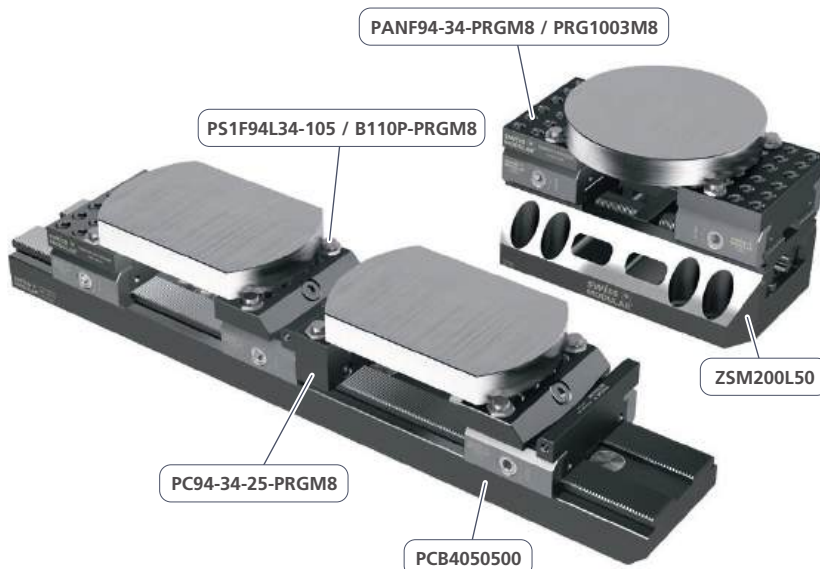
Der Einsatz dieser Spannmodule erweitert die Spannmöglichkeiten für runde und unförmige Werkstücke erheblich.

The use of these clamping modules expands the clamping possibilities for round and bulky workpieces considerably.



Bei knapp gespannten Werkstücken sind direkt-Prägebacken die ideale Wahl zum spannen.

For tight clamped workpieces, direct stamping jaws are the ideal choice for clamping.

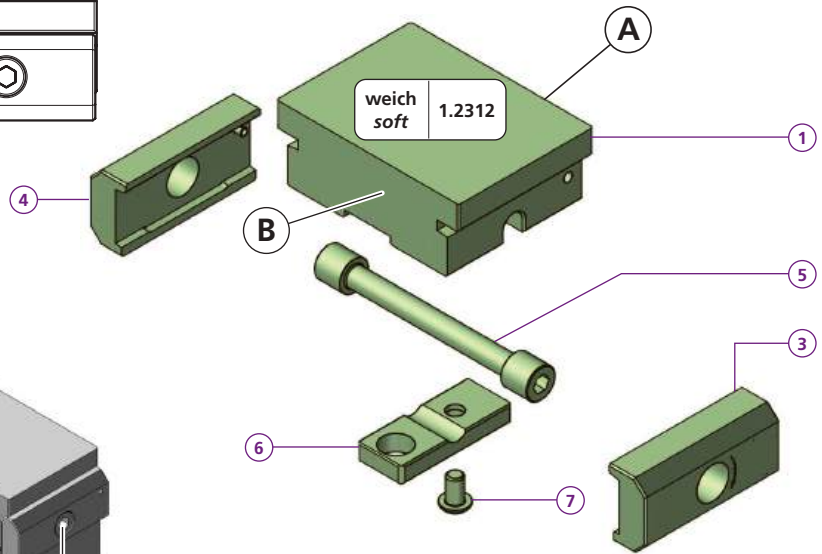
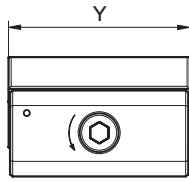
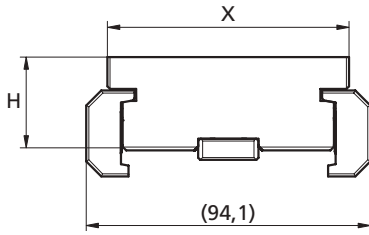


Rohlingsmodule
Blank module

PT-F80-30X60
PT-F80-30X60NS
PT-F80-30X30NS

PT-F61-25X60
PT-F61-25X50
PT-F61-25X30

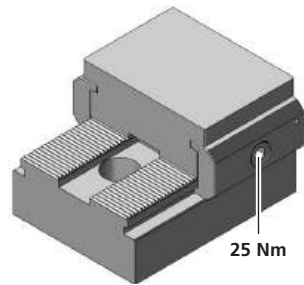
5axes
powerCLAMP



PT-F80-30X60

- 1 1x TF140637
- 3 1x PCSP60R
- 4 1x PCSP60L
- 5 1x PCS14
- 6 1x PCGU2049
- 7 1x M6X8ISO7380

X = 80
H = 30
Y = 60
kg ~1,4

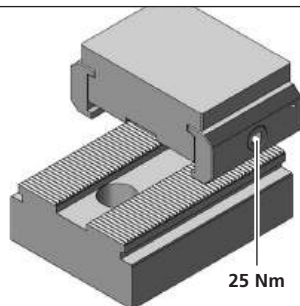


PT-F80-30X60NS

- 1 1x TF140635
- 3 1x PCSP60R
- 4 1x PCSP60L
- 5 1x PCS14
- 6 1x PCGU2049
- 7 1x M6X8ISO7380

X = 80
H = 30
Y = 60
kg ~1,4

NS = Rohlingsmodul freie Positionierung ohne Verzahnung
Carrier module without positioning serration for free positioning

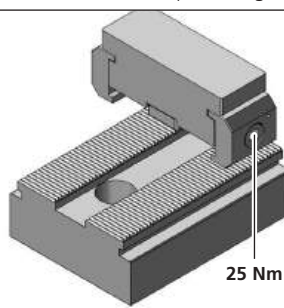


PT-F80-30X30NS

- 1 1x TF140749
- 3 1x PCSP30R
- 4 1x PCSP30L
- 5 1x PCS14
- 6 1x PCGU2030
- 7 1x M6X8ISO7380

X = 80
H = 30
Y = 30
kg ~0,7

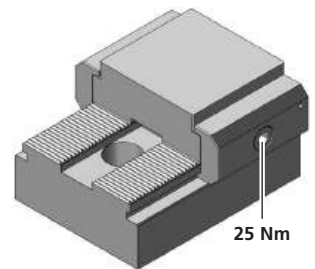
NS = Rohlingsmodul freie Positionierung ohne Verzahnung
Carrier module without positioning serration for free positioning



PT-F61-25X60

- 1 1x TF140638
- 3 1x PCSP60R
- 4 1x PCSP60L
- 5 1x PCS14
- 6 1x PCGU2049
- 7 1x M6X8ISO7380

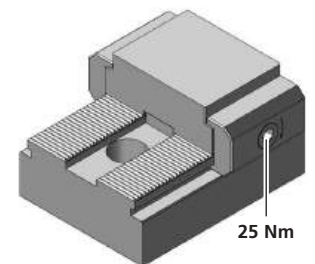
X = 61
H = 25
Y = 60
kg ~1,1



PT-F61-25X50

- 1 1x TF140750
- 3 1x PCSP50R
- 4 1x PCSP50L
- 5 1x PCS14
- 6 1x PCGU2049
- 7 1x M6X8ISO7380

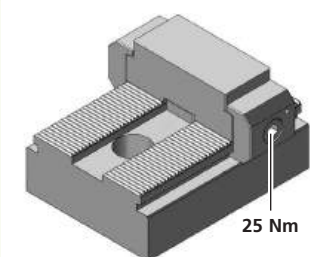
X = 61
H = 25
Y = 50
kg ~1,0



PT-F61-25X30

- 1 1x TF140636
- 3 1x PCSP30R
- 4 1x PCSP30L
- 5 1x PCS14
- 6 1x PCGU2049
- 7 1x M6X8ISO7380

X = 61
H = 25
Y = 30
kg ~0,6



Rohlingsmodule
Blank module

PR94-49SET

PR125-49SETALU

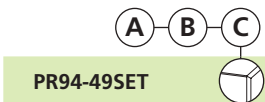
PT-F132-34RDSET

PR94-39-50SET

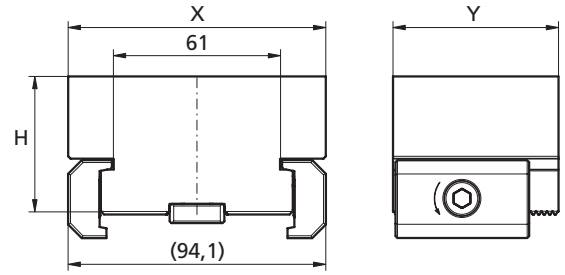
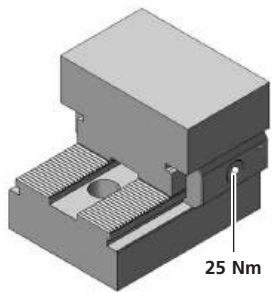
PR150-49SET

PR125-49SET

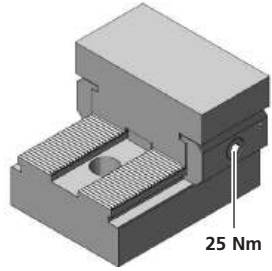
5axes
powerCLAMP



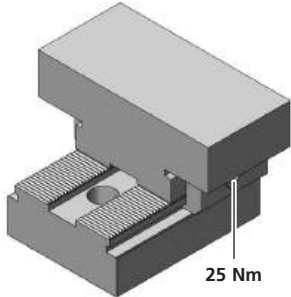
- PR94-49SET**
- 1 1x PR94-49
 - 3 1x PCSP50R
 - 4 1x PCSP50L
 - 5 1x PCS14
 - 6 1x PCGU2049
 - 7 1x M6X8ISO7380
- X = 94
H = 49
Y = 60,4
kg ~2,3



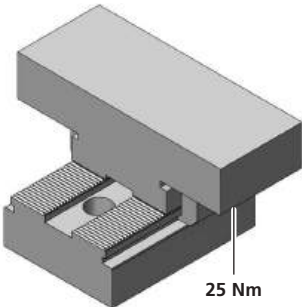
- PR94-39-50SET**
- 1 1x PR94-39-50
- X = 94
H = 39
Y = 50,4
kg ~1,6



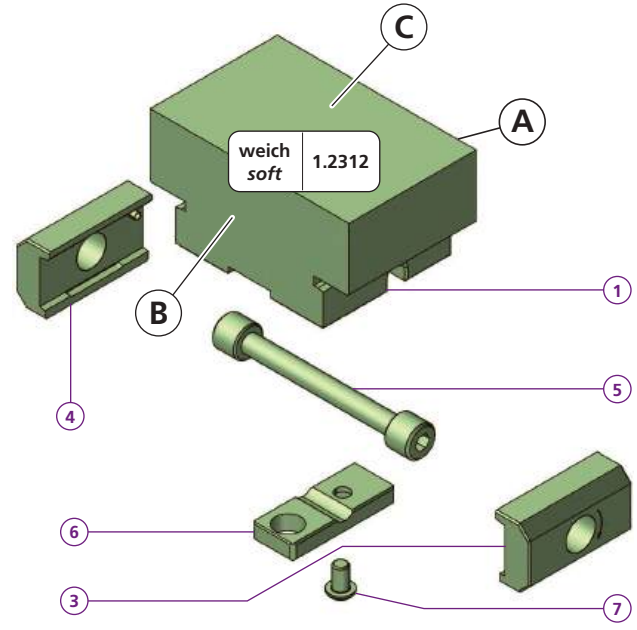
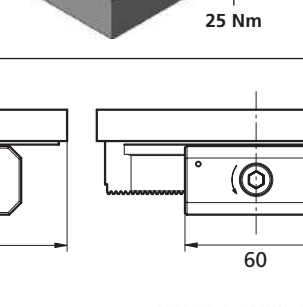
- PR125-49SET**
- 1 1x PR125-49
- X = 125
H = 49
Y = 60,4
kg ~2,7



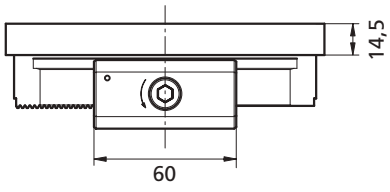
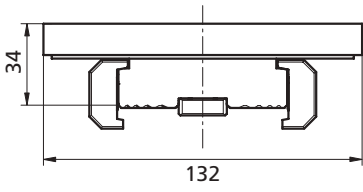
- PR125-49SETALU**
- 1 1x *PR125-49ALU
- X = 125
H = 49
Y = 60,4
kg ~0,83



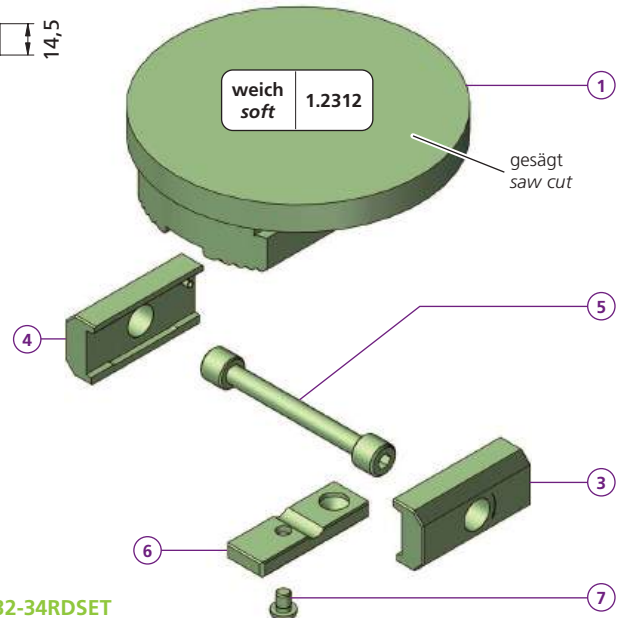
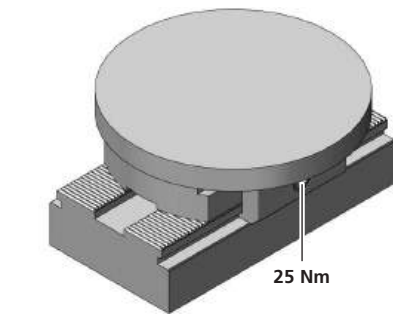
- PR150-49SET**
- 1 1x PR150-49
- X = 150
H = 49
Y = 60,4
kg ~3,1



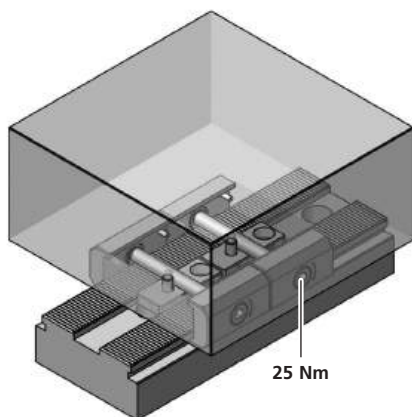
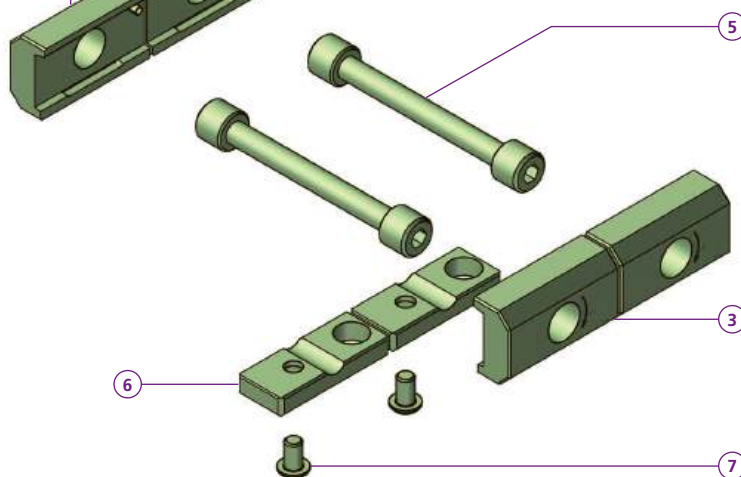
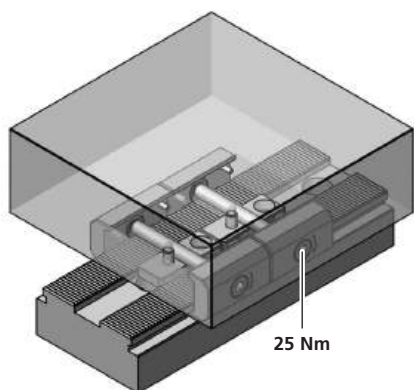
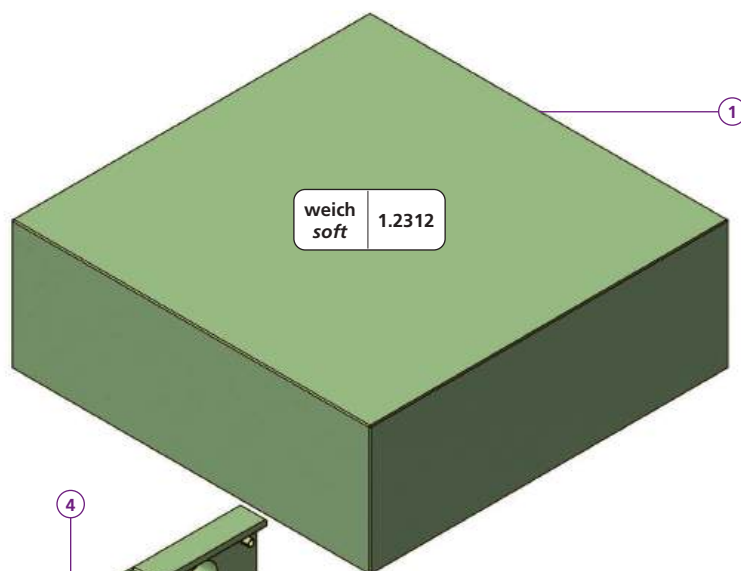
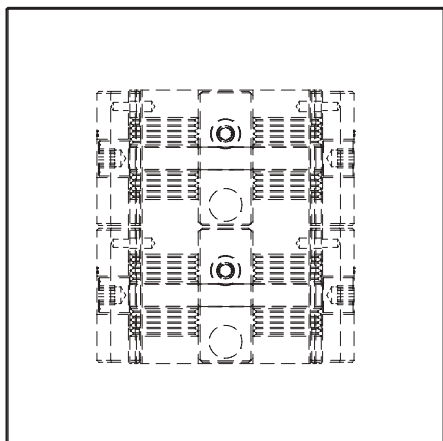
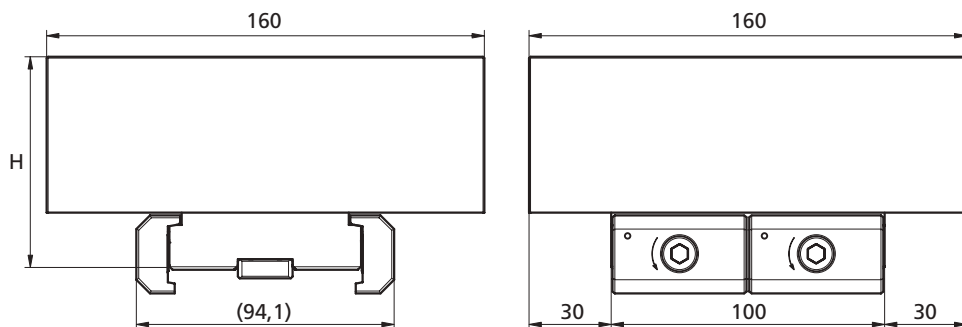
* ALU = ENAW-7022 Bestellbeispiel / Ordering example: PR94-49SET



- PT-F132-34RDSET**
- 1 1x PT-F132-34RD
 - 3 1x PCSP60R
 - 4 1x PCSP60L
 - 5 1x PCS14
 - 6 1x PCGU2059
 - 7 1x M6X8ISO7380
- kg ~3,1



Bestellbeispiel / Ordering example: PT-F132-34RDSET



PTX160-57S

- ① 1x TH130539
- ③ 2x PCSP50R
- ④ 2x PCSP50L
- ⑤ 2x PCS14
- ⑥ 2x PCGU2049
- ⑦ 2x M6X8ISO7380

H = 57

kg ~9

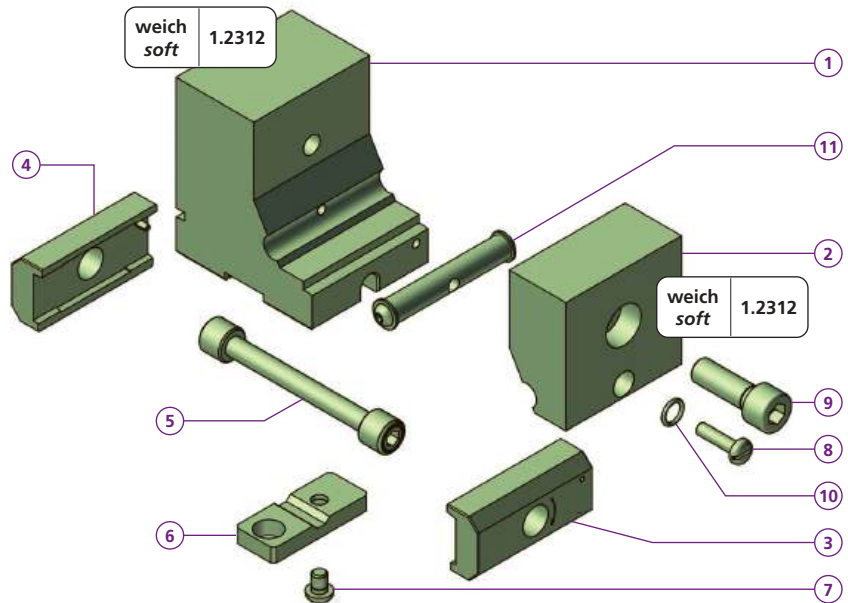
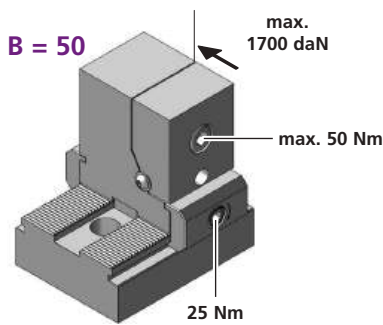
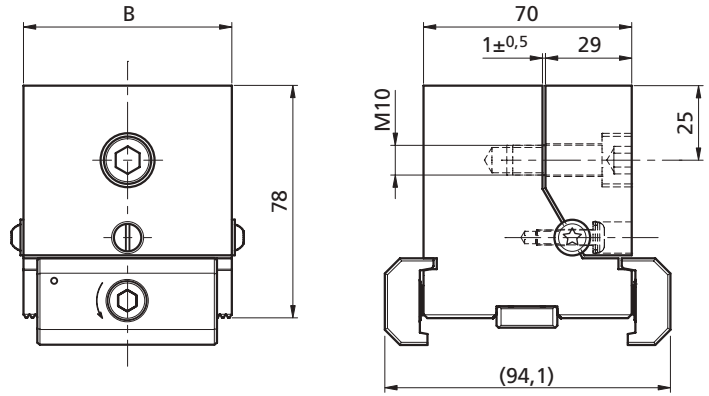
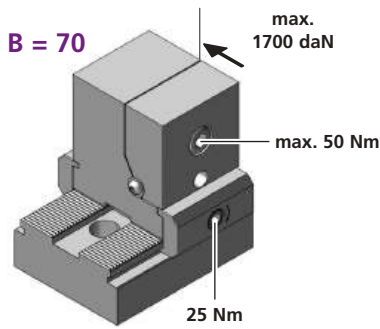
PTX160-77S

- ① 1x TH130723

H = 77

kg ~13

Bestellbeispiel / Ordering example: **PTX160-57S**

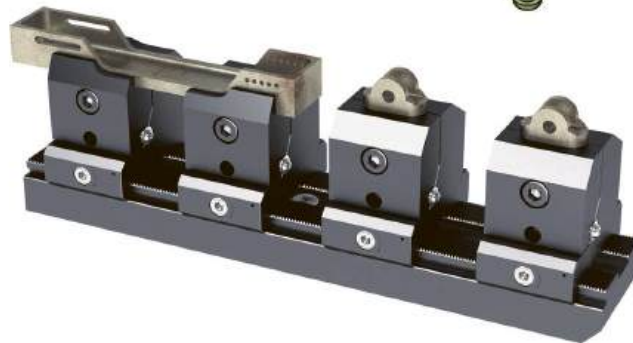


- PS1X70L78ST**
- ① 1x PRS7078AST
 - ② 1x PRS7078SST
 - ③ 1x PCSP60R
 - ④ 1x PCSP60L
 - ⑤ 1x PCS14
 - ⑥ 1x PCGU2049
 - ⑦ 1x M6X8ISO7380
 - ⑧ 1x M5X20BN1362
 - ⑨ 1x M10X30ISO4762
 - ⑩ 1x OR Ø 8x1,5
 - ⑪ 1x PRS7078G
- B = 70
kg ~3,2

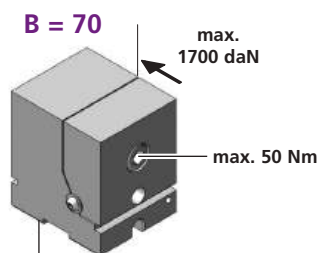
- PS1X50L78ST**
- ① 1x PRS5078AST
 - ② 1x PRS5078SST
 - ③ 1x PCSP50R
 - ④ 1x PCSP50L
 - ⑪ 1x PRS5078G
- B = 50
kg ~2,3

- PRS70L78ST**
- ① 1x PRS7078AST
 - ② 1x PRS7078SST
 - ⑪ 1x PRS7078G
- B = 70
kg ~2,8

- PRS50L78ST**
- ① 1x PRS5078AST
 - ② 1x PRS5078SST
 - ⑪ 1x PRS5078G
- B = 50
kg ~2,0



Drehmoment Torque		Spannkraft Workholding force		
Nm	(lb-ft)	~daN	~(lb)	~t
10	7,4	= 400	880	0,4
20	14,8	= 800	1'760	0,8
30	22,2	= 1'200	2'650	1,2
40	29,6	= 1'600	3'530	1,6

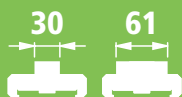


PRS = Rohlingsmodul ohne Spannpratzen
Blank module side clamp



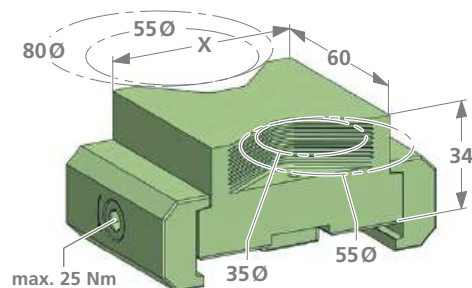
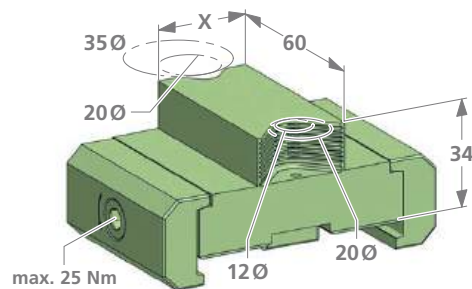
Spannbacken Rohling auf Kundenwunsch angepasst
Jaw blank machined to customer specification

Bestellbeispiel / Ordering example: **PS1X70L78ST**



Anschlagmodul für runde Werkstücke
Endmodule for round workpieces

Art. Nr.		Ø	X	kg
PAND30-34RV12-35		12 – 35	30	~1,1
PAND61-34RV35-80		35 – 80	61	~1,26

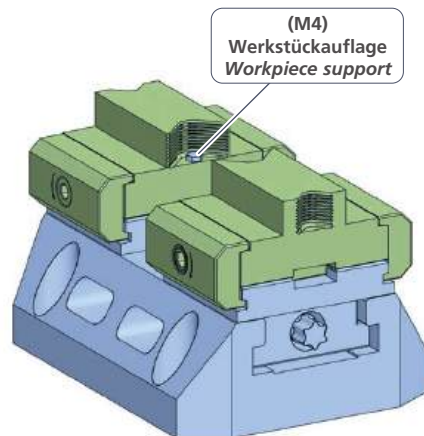


Runde Werkstücke, die einen Durchmesserbereich von 12 – 80 mm abdecken, können auf vielfältige Art gespannt werden.

Round workpieces covering a diameter range from 12 - 80 mm can be clamped in a variety of ways.



Module einsetzbar auf Zentrischspannern oder Basisschienen.
Modules can be used on self centrig vises or base rails.



Drehmoment Torque		Spannkraft Workholding force		
Nm	(lb-ft)	~daN	~(lb)	~t
10	7,4	= 200	440	0,2
20	14,8	= 500	1'102	0,5
30	22,2	= 1'000	2'204	1,0
40	29,6	= 1'300	2'866	1,3
50	37,0	= 1'600	3'527	1,6

NUSS3/8"TX30E14

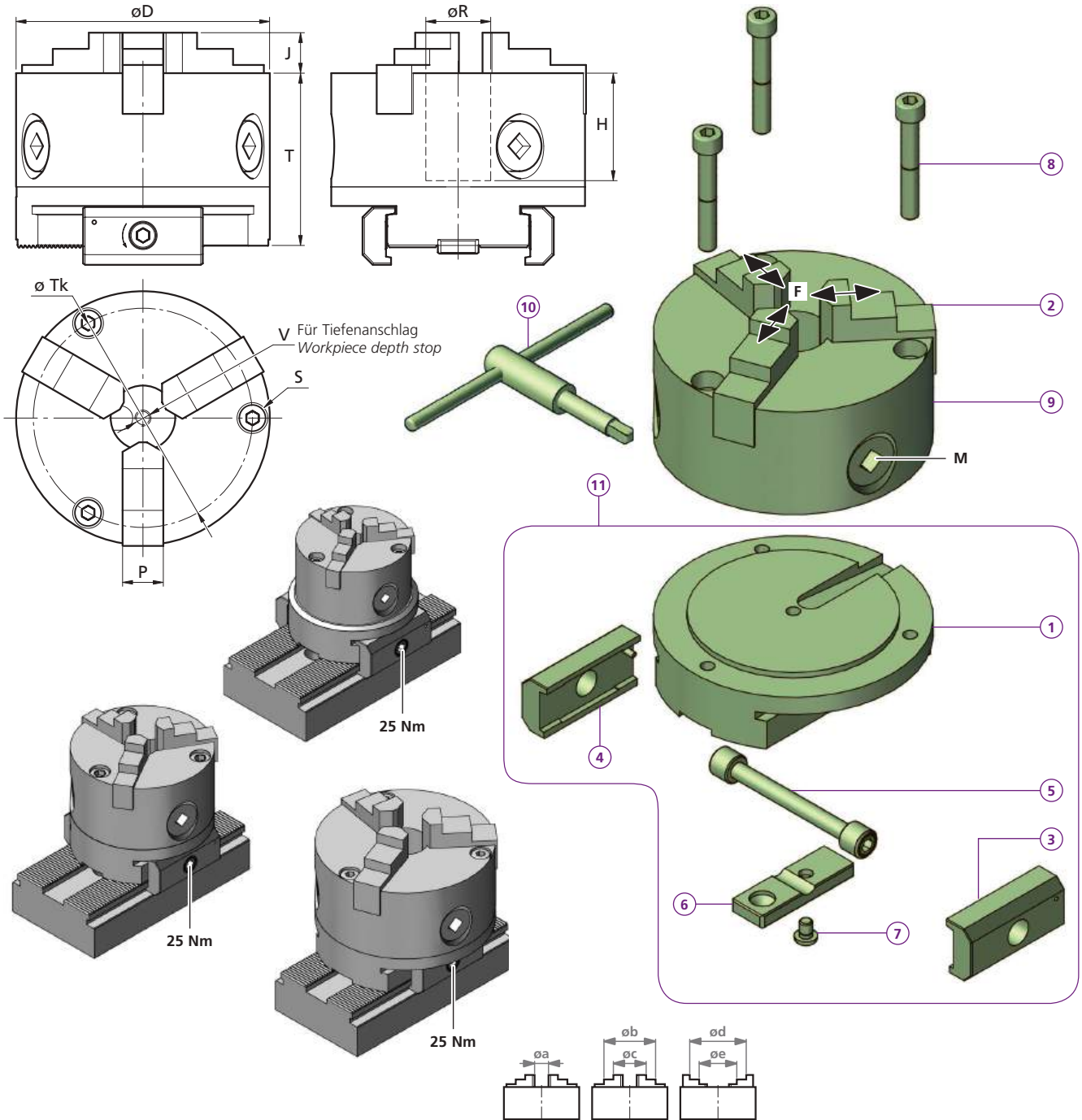
WICHTIG!
Bitte separat bestellen
IMPORTANT!
Please order separately



Dreibackenfutter
Three jaw chuck

PS3X80L75BSET
PS3X100L82BSET
PS3X125L87BSET

5axes
powerCLAMP



	D	J	T	R	H	P	V	a mm	b mm	c mm	d mm	e mm	M (max.)	F (max.)	ø Tk	S
PS3X80L75BSET	80	13	75	15	42,5	10	M6	3...27	48...73	23...48	52...76	27...51	28 Nm	1300 daN	67	M6
PS3X100L82BSET	100	17	82	20	49,5	14	M8	3...39	58...94	24...60	64...100	30...66	38 Nm	1600 daN	83	M8
PS3X125L87BSET	125	19	87	32	55	16	M8	3...49	70...116	30...75	83...125	38...84	55 Nm	2600 daN	108	M8

PS3X80L75BSET

- 1 1x TW090013_01
- 2 2x 3 Stk. / pcs
- 3 1x PCSP60R
- 4 1x PCSP60L
- 5 1x PCS14
- 6 1x PCGU2059
- 7 1x M6X8ISO7380
- 8 3x M6X45ISO4762
- 9 1x 243809.0083220
- 10 1x 243864.0080000
- 11 PTX80-30

kg ~2,8

PS3X100L82BSET

- 1 1x TW090012_01
- 2 2x 3 Stk. / pcs
- 8 3x M8X50ISO4762
- 9 1x 243809.0103220
- 10 1x 243864.0100000
- 11 PTX100-30

kg ~4,3

PS3X125L87BSET

- 1 1x TW080027_01
- 2 2x 3 Stk. / pcs
- 8 3x M8X55ISO4762
- 9 1x 243809.0123220
- 10 1x 243864.0120000
- 11 PTX125-29

kg ~6,3

Ø 80
100
125

243849.0083200 243850.0083200 *243834.0083300
243849.0103200 243850.0103200 *243834.0103300
243849.0123200 243850.0123200 *243834.0123300

3x
Ø 3 - 49

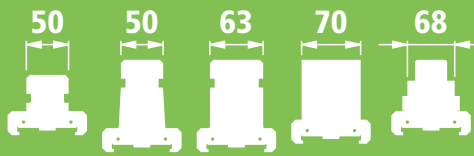
3x
Ø 38 - 125

3x
*Weich
Soft
16MnCr5

Bestellbeispiel / Ordering example: **PS3X125L87BSET**

Separat bestellen / Order separately

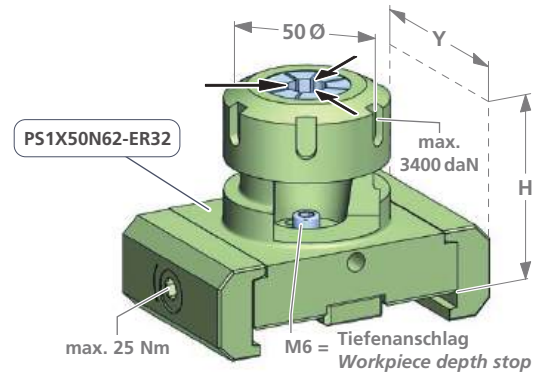
Spannzangenmodule Collet modules



5axes
powerCLAMP

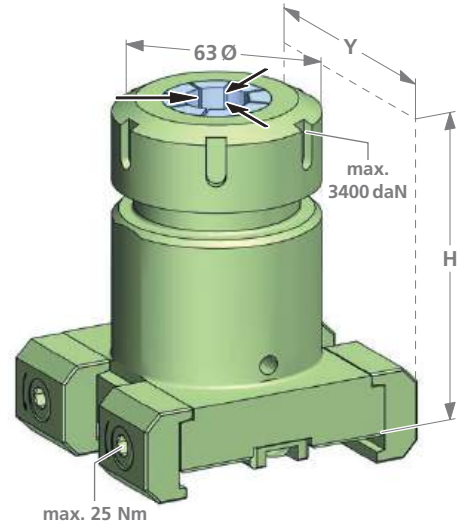
für die horizontale und vertikale Bearbeitung
for horizontal and vertical machining

Art. Nr.	kg	Ø	Y	H
PS1X50N62-ER32	~1,3	2-22	60	62
PS1X50N100-ER32	~2,2	2-22	60	100
PS1X63N100-ER40	~2,3	3-29	80	100



Diese Spannzangenmodule ermöglichen das ideale Spannen und Bearbeiten von Stangenmaterial.

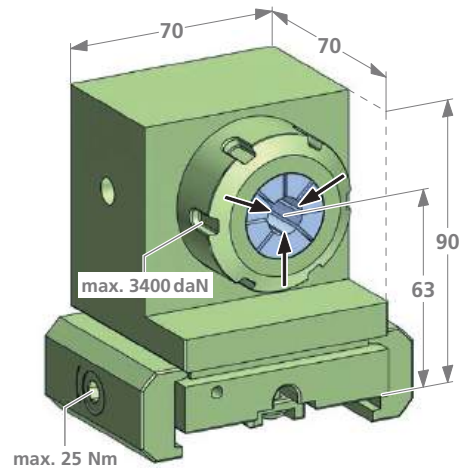
These collet modules enable ideal clamping and machining of bar material.



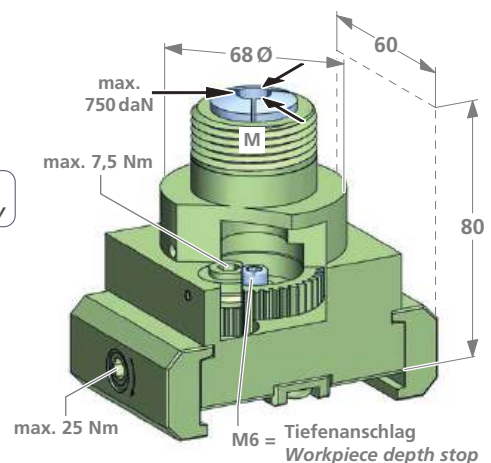
Art. Nr.	kg	Ø
PS1X50N70H-ER32-NS	~2,98	2-22

Die seitlichen Spannpratzen können um 90° gedreht werden, dadurch kann das Spannzangenmodul auch quer zur Schiene platziert werden.

The side clamps can be turned by 90°, the module can therefore be placed crosswise to the rail.

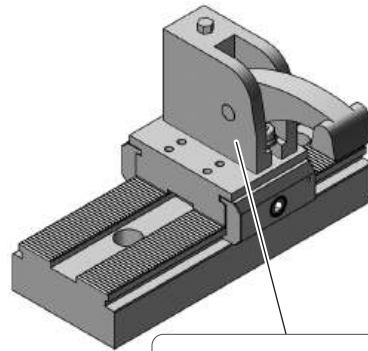
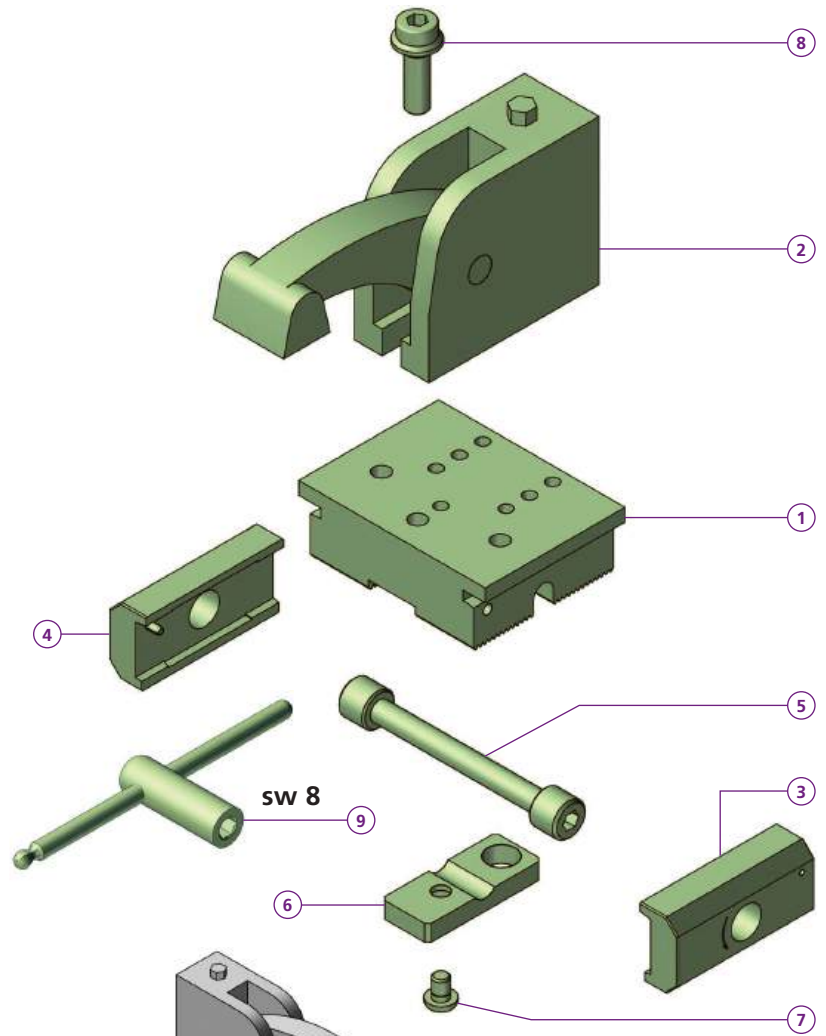
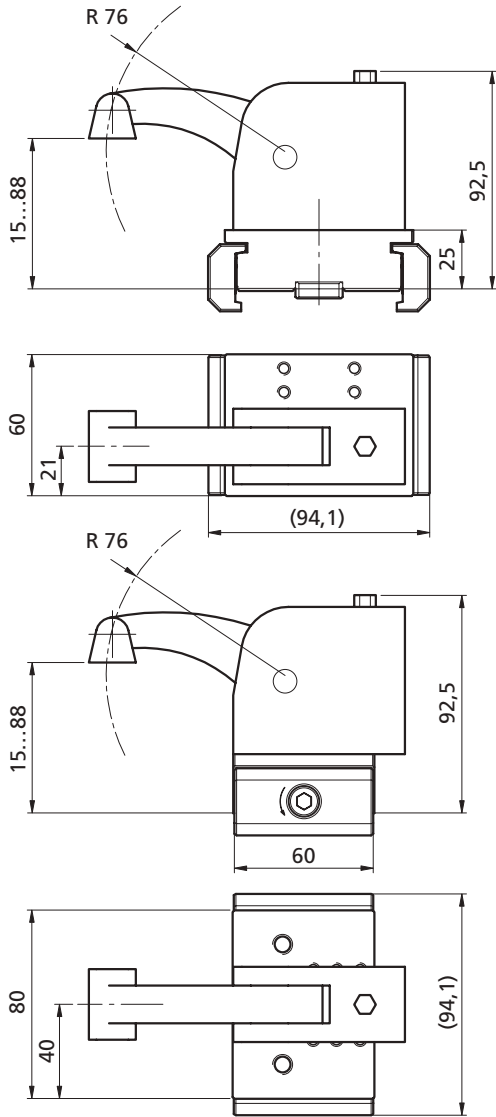


Art. Nr.	kg	Ø	M
PS1X68N80-W20	~1,8	0,5-20	M37,6x3

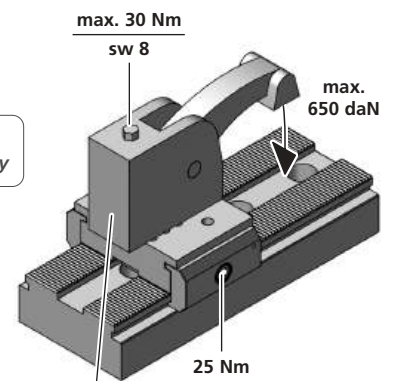


PS1F-KLD1
PS1F-KLD1NS

powerCLAMP



Spanner quer montiert
Clamp mounted transversely



Spanner längs montiert
Clamp mounted longitudinally



NS = Trägermodul freie Positionierung ohne Verzahnung
Carrier module without positioning serration for free positioning

PS1F-KLD1	
1	1x PCTMV1F
2	1x 07-020
3	1x PCSP60R
4	1x PCSP60L
5	1x PCS14
6	1x PCGU2049
7	1x M6X8ISO7380
8	1x M8x25 TW080012-02
9	1x 07-180
kg	~2,1
PS1F-KLD1NS	
2	1x PCTMV1FNS
kg	~2,1

Bestellbeispiel / Ordering example: **PS1F-KLD1NS**

Plattenspanner / Plate clamping modul PS1F20L35BV1
Trägermodul für Micro Zentrischspanner PS1F20L35BV1NS
Support module for micro self centering vise PTX-MCZ40L30 powerCLAMP

PS1F20L35BV1

- ① 1x PCTMV1F
- ② 1x MV1F20L35BV1
- ③ 1x PCSP60R
- ④ 1x PCSP60L
- ⑤ 1x PCS14
- ⑥ 1x PCGU2049
- ⑦ 1x M6X8ISO7380

kg ~1,4

PS1F20L35BV1NS

- ① 1x PCTMV1FNS

kg ~1,4

NS = Trägermodul freie Positionierung ohne Verzahnung
Carrier module without positioning serration for free positioning

microCLAMP p. 177

PTX-MCZ40L30

- ① 1x TB200682
- ② 1x —
- ③ 1x PCSP60R
- ④ 1x PCSP60L
- ⑤ 1x PCS14
- ⑥ 1x PCGU2049
- ⑦ 1x TN100008

kg ~0,94

triCENTRO p. 116

Nach Ihren Bedürfnissen können die Micro Zentrischspanner ausgewählt werden.
The micro self centering vise can be selected according to your needs.

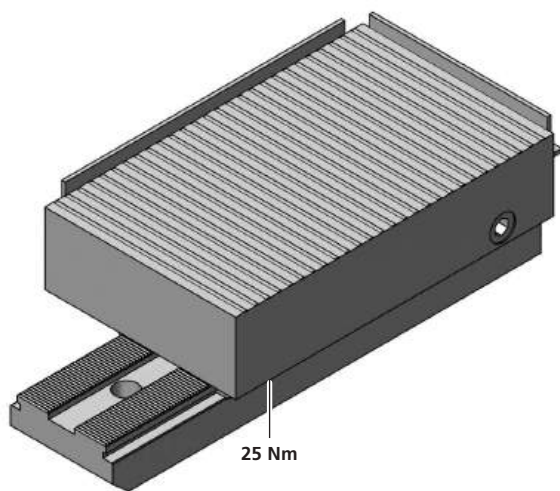
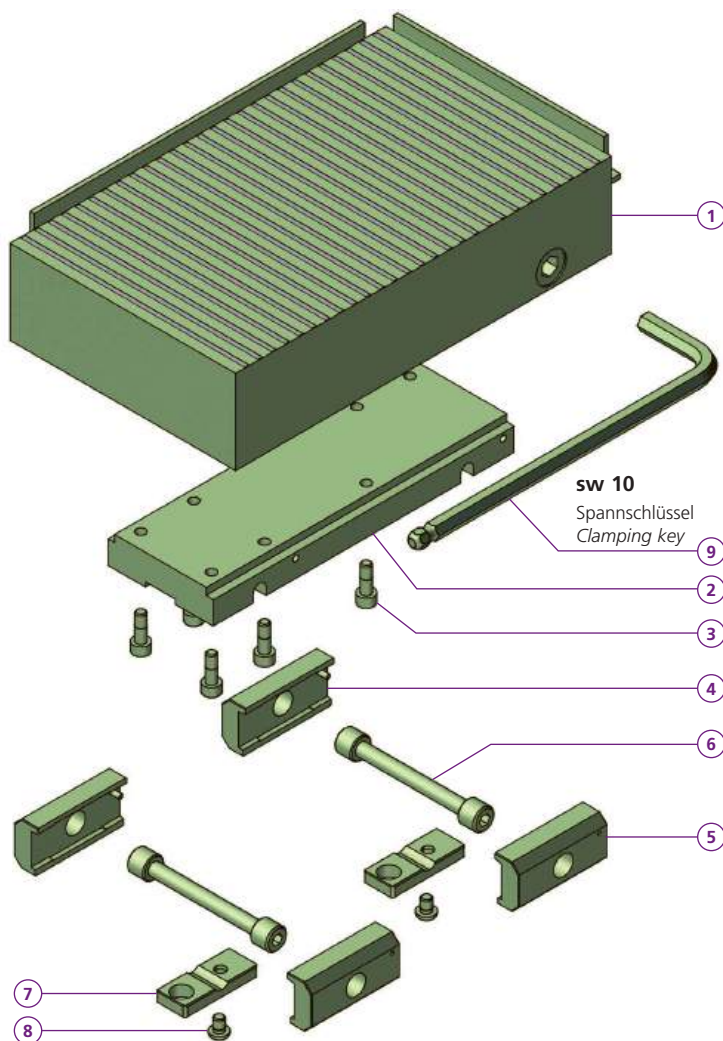
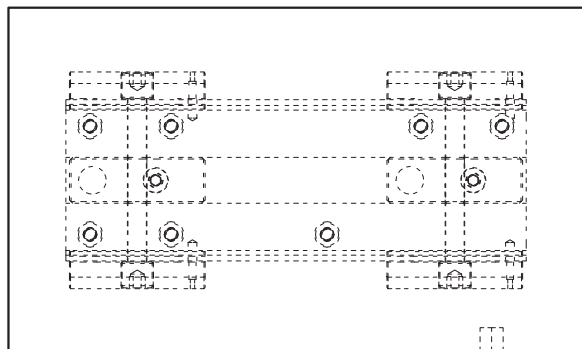
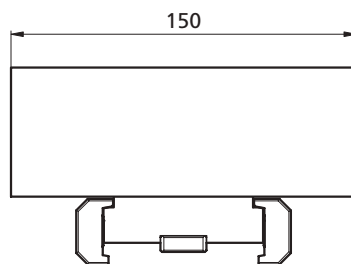
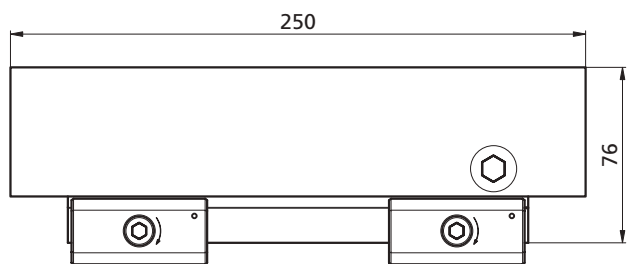
Bestellbeispiel / Ordering example: **PS1F20L35BV1**

Magnetspannplatte

Magnetic chuck

PS1X150L60-250MAG11

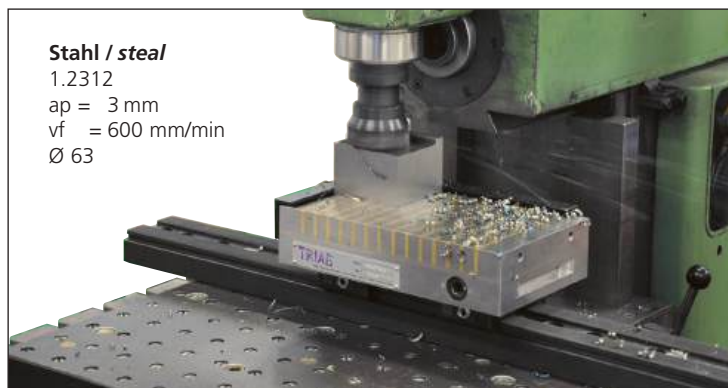
powerCLAMP



PS1X150L60-250MAG11

- ① 1x XNeomill 250x150
- ② 1x TL110010-01
- ③ 7x MS60
- ④ 2x PCSP60L
- ⑤ 2x PCSP60R
- ⑥ 2x PCS14
- ⑦ 2x PCGU2049
- ⑧ 2x M6X8ISO7380
- ⑨ 1x ISL10 DIN 911L

kg ~19,5

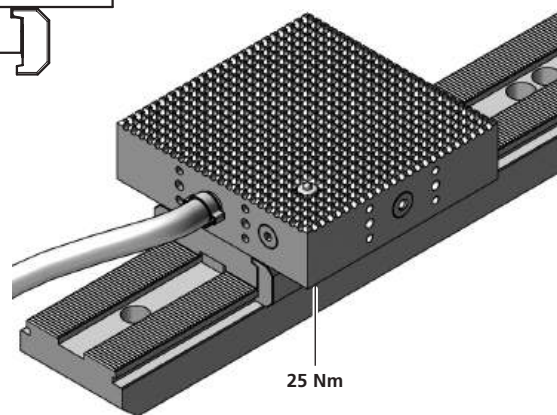
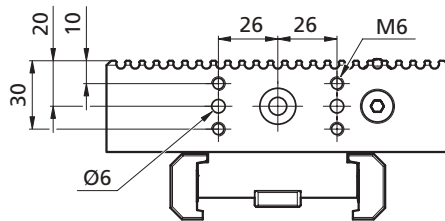
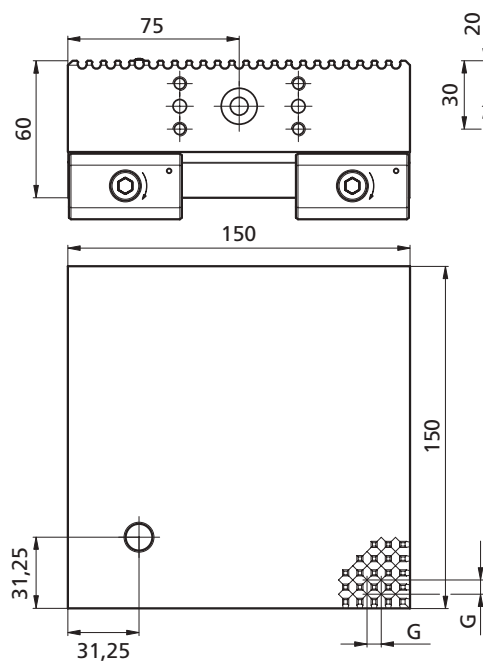


Stahl / steel
 1.2312
 ap = 3 mm
 vf = 600 mm/min
 Ø 63

max. Haltekraft / max. holding force = 120 N/cm²

- Werkstücke ab 26 mm Länge und 6 mm Stärke werden optimal gespannt
- Workpieces from 26 mm length and 6mm thickness will be optimally hold

Bestellbeispiel / Ordering example: PS1X150L60-250MAG11



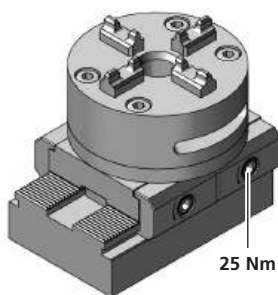
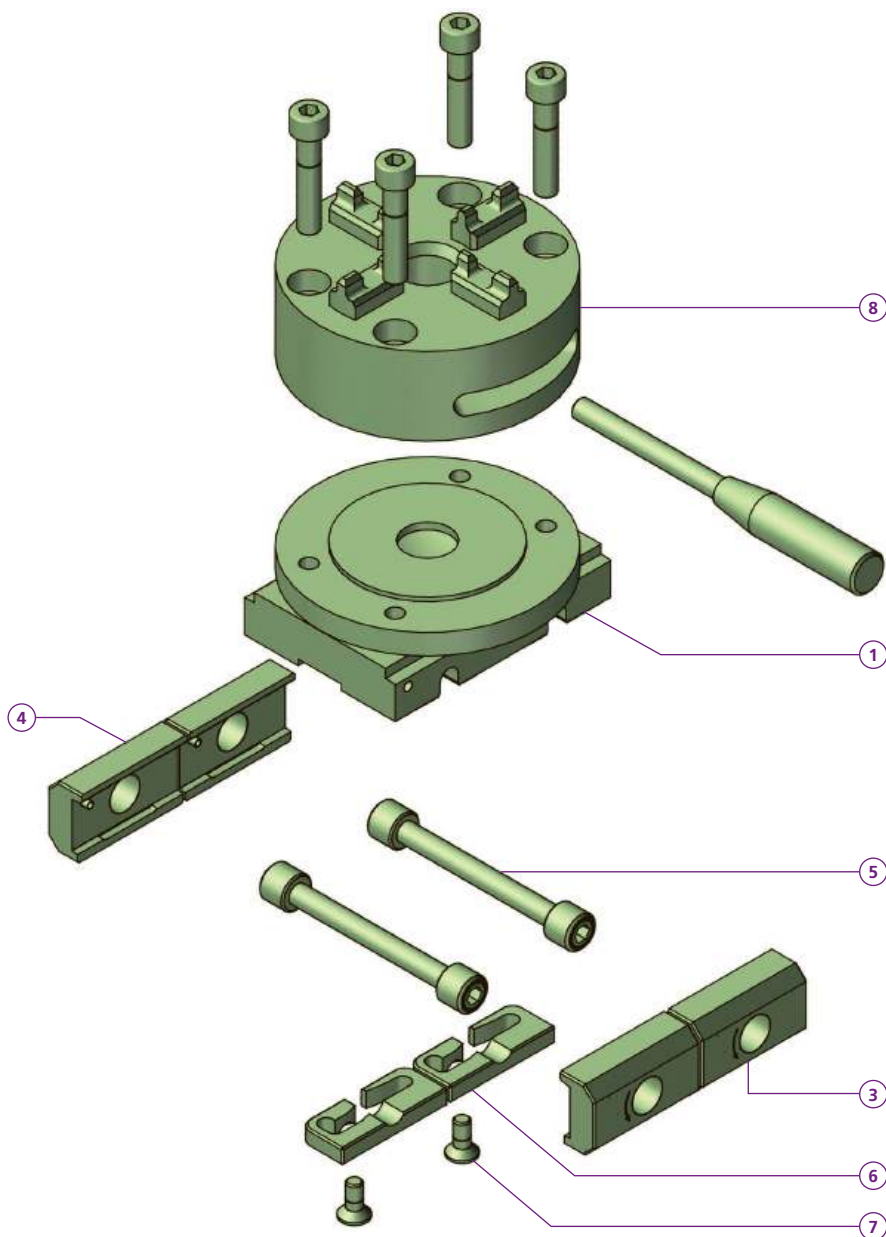
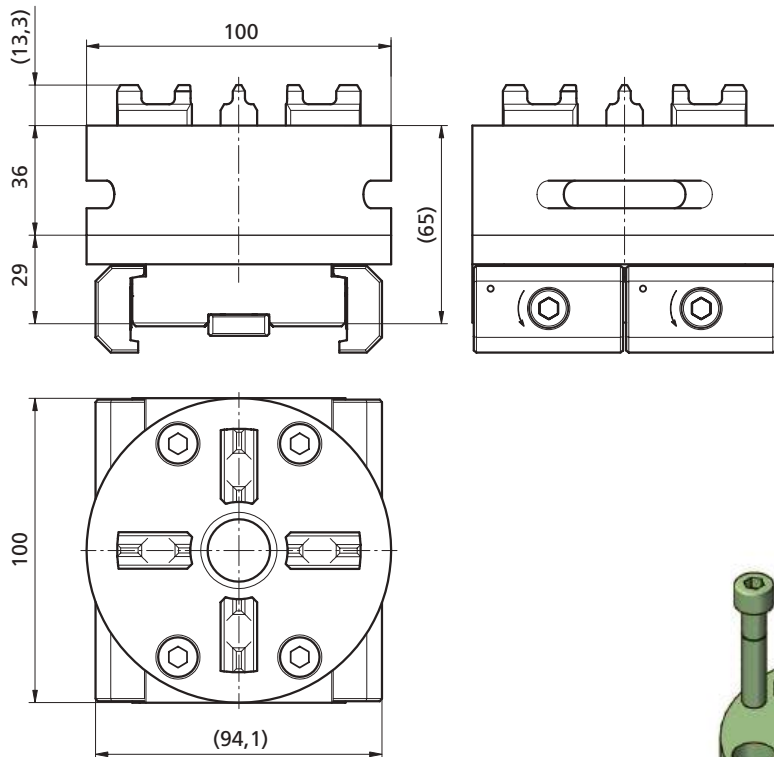
trivaCLAMP p. 318

Mehr Informationen siehe Vacuum
For more information check the vacuum workholding

Bestellbeispiel / Ordering example: PS1X150L60-VAC

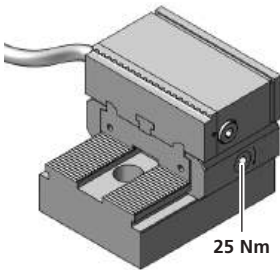
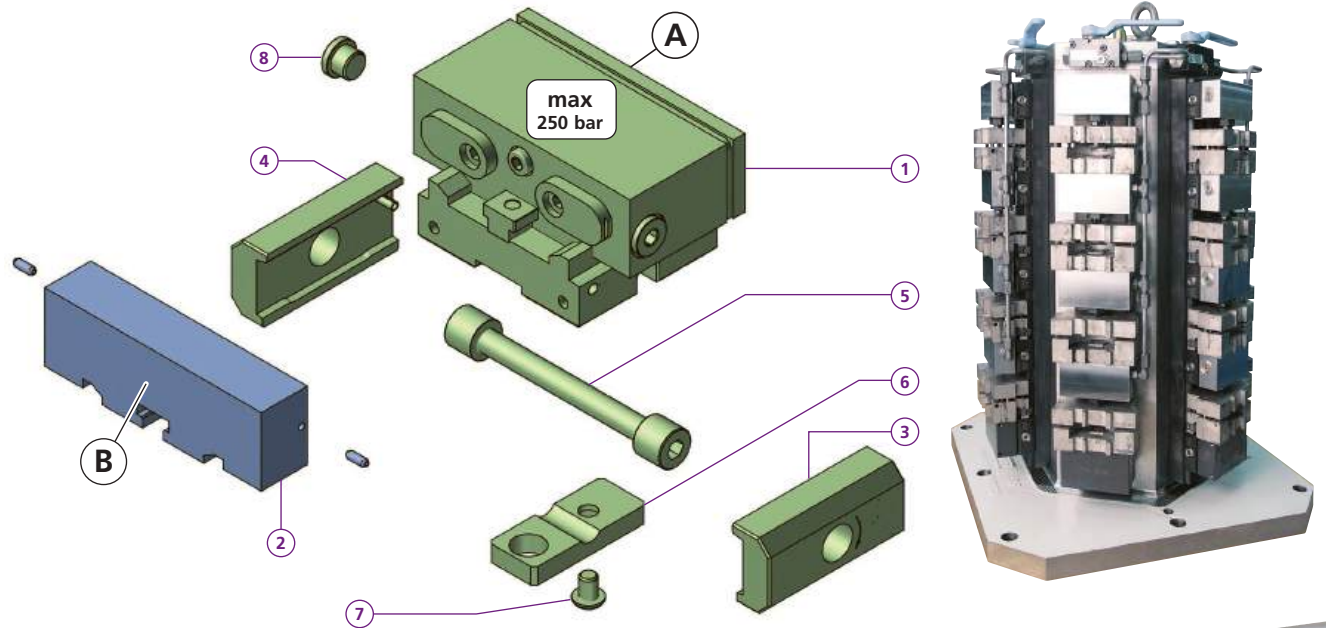
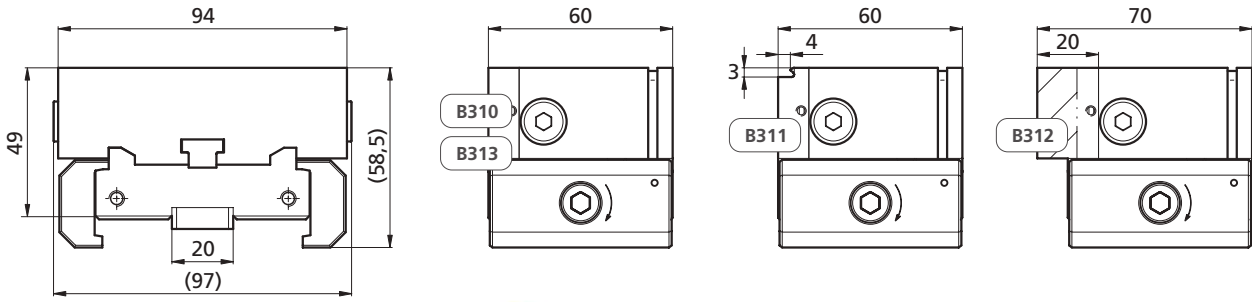


triCENTRO p. 113 - 152



PS1X100-65ER-036345

- 1 1x PTX100-29
 - 3 2x PCSP50L
 - 4 2x PCSP50R
 - 5 2x PCS14
 - 6 2x PCGU2049F
 - 7 2x M6X14ISO10642
 - 8 1x ER-036345
- kg ~4,0



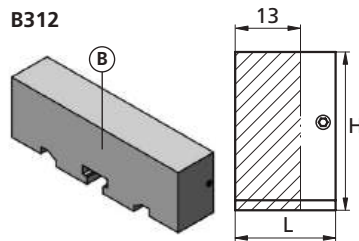
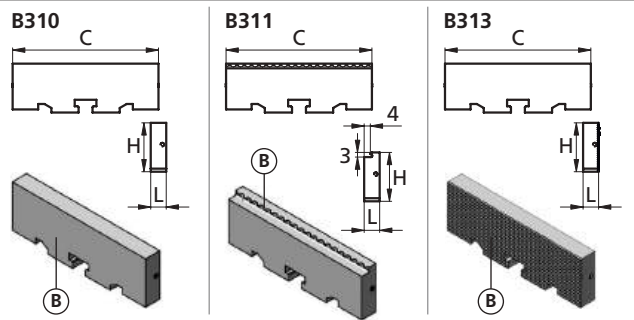
Ölvolumen / Oil volume	
Spannen / Clamping	
8 cm ³	

5 mm Hub / Stroke			
bar	~daN	~(lb)	~t
100	= 960	2116	0,96
150	= 1'440	3175	1,44
200	= 1'920	4233	1,92
250	= 2'400	5291	2,4



Bestellbeispiel / Ordering example: PSH1X94L49-310 & 1 x B310

B310	B311	B312	B313	
C	94	94	94	94
H	31,5	31,5	31,5	31,5
L	10	10	20	10
i	HV700	57HRC	*	HV700
	x0,2mm			x0,2mm
kg	~0,18	~0,17	~0,39	~0,17



Zum Erstellen Ihrer individuellen Formbacke:

Schnittzeichnung zum Ermitteln der maximalen Bearbeitungsprofiltiefe

If a dedicated jaw is being machined:
Sectional drawing to determine the maximum machining depth

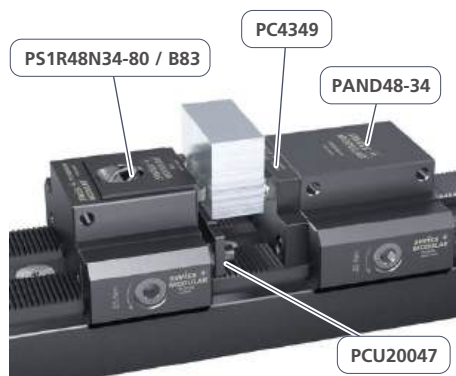
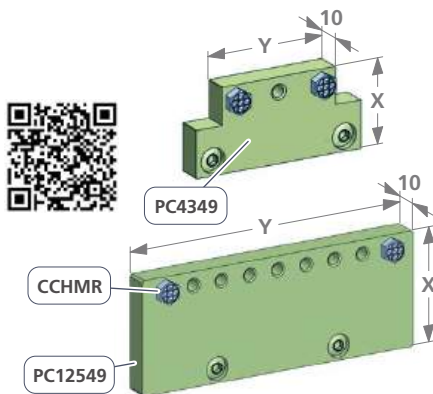
PSH1X94L49-310

- 1 1x ZF191349
- 2 1x _____
- 3 1x PCSP60R
- 4 1x PCSP60L
- 5 1x PCS14
- 6 1x PCGU2049
- 7 1x M6X81507380
- 8 2x TN100014
- kg** ~1,94

* = weich / soft (1.7225 Vergütungsstahl / Tempering steel)

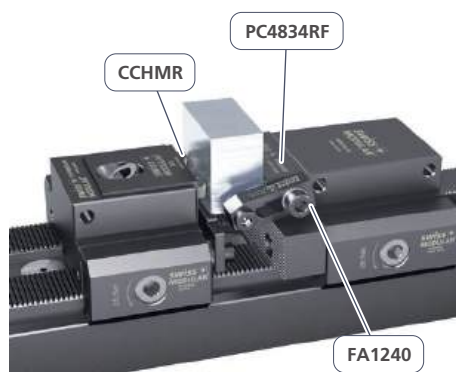
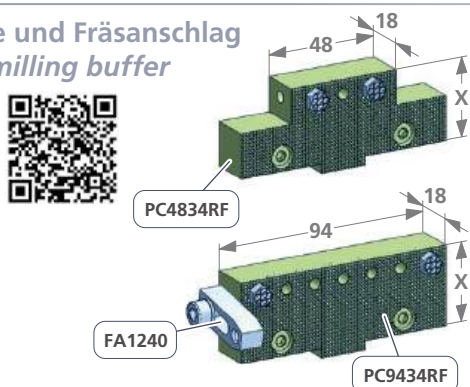
für Hartmetalldruckstücke
for carbide grippers

Art. Nr.	kg	Y	X
PC4349	~0,21	43	49
PC4834	~0,17	48	34
PC12549	~0,46	125	49



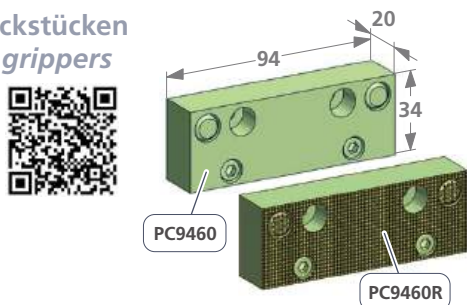
für Hartmetalldruckstücke und Fräsanschlag
for carbide grippers and milling buffer

Art. Nr.	kg	X
PC4834RF	~0,34	34
PC4849RF	~0,44	49
PC9434RF	~0,43	34
PC9449RF	~0,63	49



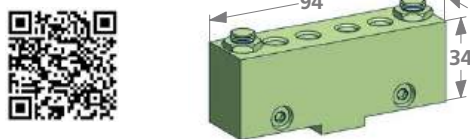
mit pendelnden Kugeldruckstücken
with swinging ball thrust grippers

Art. Nr.	kg
PC9460	~0,45
PC9460R	~0,45



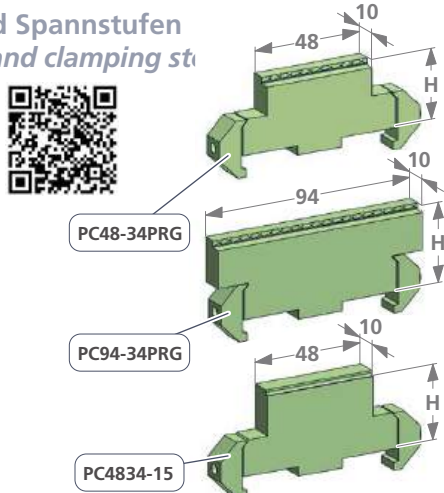
mit Prägeeinsätzen
with embossed inserts

Art. Nr.	kg
PC9434-25PRGM8	~0,64



mit direkt-Prägezähnen und Spannstufen
with direct stamping teeth and clamping steps

Art. Nr.	kg	H
PC48-34PRG	~0,18	34
PC48-49PRG	~0,24	49
PC94-34PRG	~0,25	34
PC94-49PRG	~0,48	49
PC4834-15	~0,19	34
PC4849-15	~0,24	49



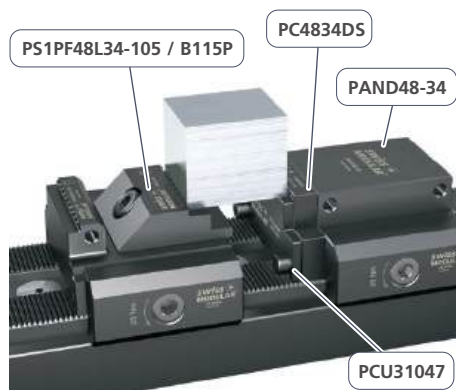
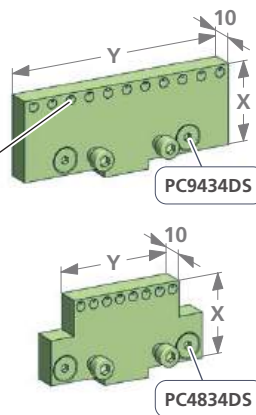
mit Druckstiften
with pressure pins

Art. Nr.	kg	Y	X
PC4349DS	~0,22	43	49
PC4834DS	~0,17	48	34
PC4849DS	~0,23	48	49
PC9434DS	~0,27	94	34
PC9449DS	~0,38	94	49
PC12549DS	~0,49	125	49



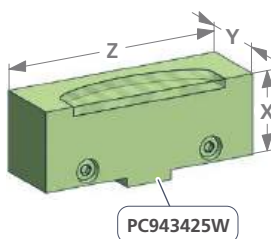
Druckstift
Pressure pin
DSE0402-60°

weitere Druckstücke
more gripping pens
p. 337



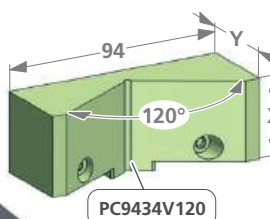
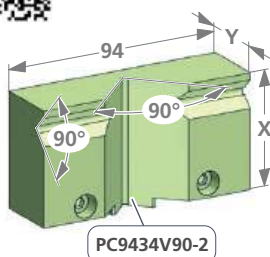
aus weichem Stahl, zur Herstellung Ihrer individuellen Backe
made of soft steel, for the production of your individual clamping jaw

Art. Nr.	kg	Z	Y	X
PC943425W weicher Stahl (1.0570)	~0,64	94	25	34
PC943430W weicher Stahl (1.0570)	~0,77	94	30	34
PC944930W weicher Stahl (1.0570)	~1,10	94	30	49
PC1254930W weicher Stahl (1.0570)	~1,46	125	30	49



in Prismaform
in prism form

Art. Nr.	kg	Y	X
PC9434V90-2	~0,58	28	34
PC9449V90-2	~0,58	28	49
PC9434V120	~0,62	35	34
PC9449V120	~0,89	35	49



Ø
min 5
max 16
Spanndurchmesser horizontal
Clamping diameter horizontal

PC9449V90-2

PC9434V120

Ø
min 23
max 158
Spanndurchmesser vertical
Clamping diameter vertical

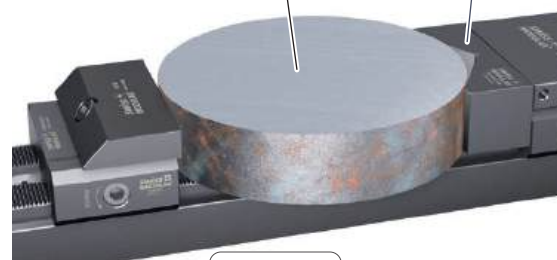
PC9434V120

Ø
min 16
max 52
Spanndurchmesser vertical
Clamping diameter vertical

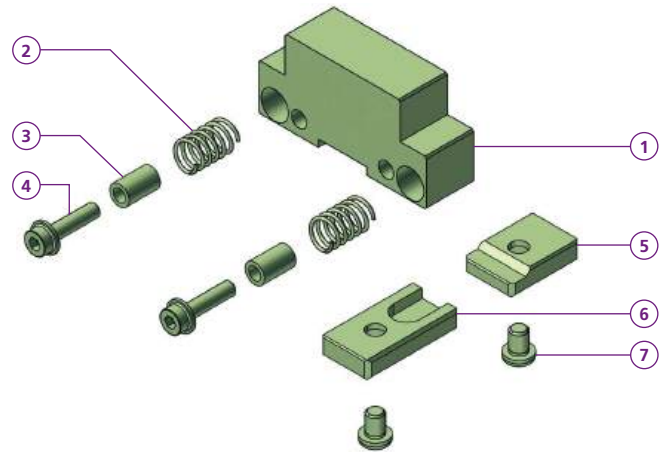
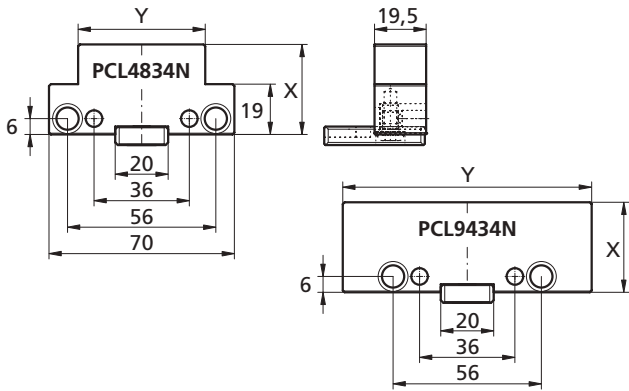
PAND94-49

PS1F94L49-105 / B110

PCU20047



Von Niederzug zu Linear!
From pull down jaws to linear stroke!

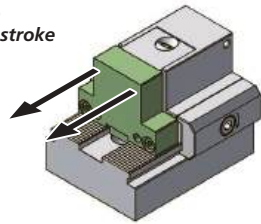


PCL4349N

- 1 1x TF140697
- 2 2x FED10175
- 3 2x PCD0813
- 4 2x M5X20BN1392
- 5 1x PCGU2028
- 6 1x PCGU2030LB
- 7 2x M6X8ISO7380

X = 49
Y = 43
kg ~0,43

Spannhub
Clamping stroke
0/+3,8

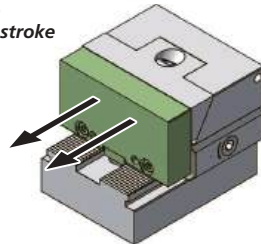


PCL9449N

- 1 1x TF140700

X = 49
Y = 94
kg ~0,74

Spannhub
Clamping stroke
0/+3,8

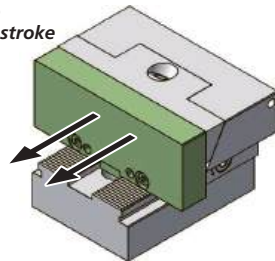


PCL12549N

- 1 1x T00317

X = 49
Y = 125
kg ~0,97

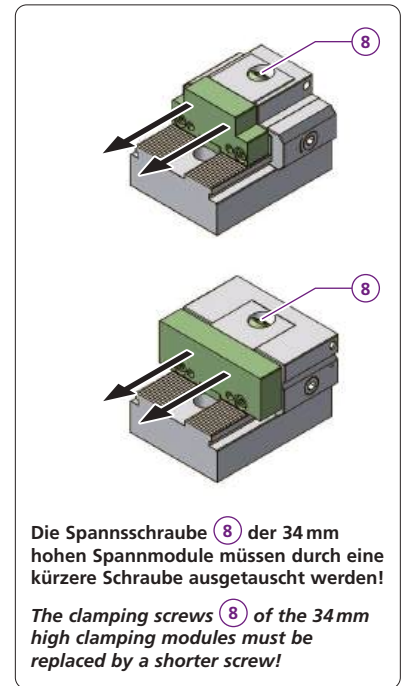
Spannhub
Clamping stroke
0/+4,8



PCL4834N

- 1 1x TF140698
- 2 2x FED10175
- 3 2x PCD0813
- 4 2x M5X20BN1392
- 5 1x PCGU2028
- 6 1x PCGU2030LB
- 7 2x M6X8ISO7380
- 8 1x M10X22ISO4762

X = 34
Y = 48
kg ~0,35



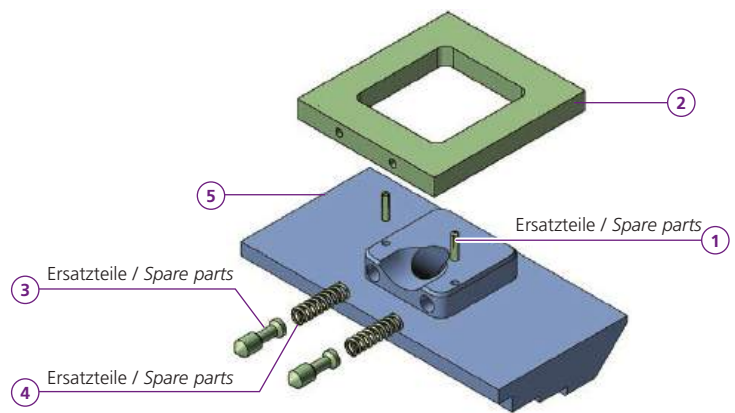
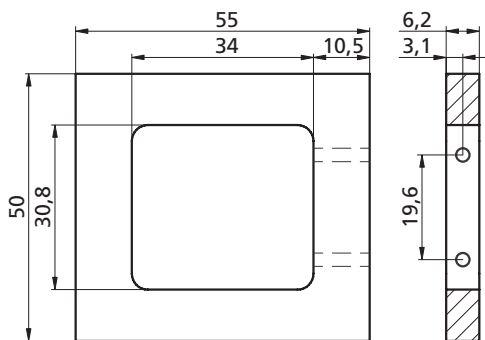
PCL9434N

- 1 1x TF140699

X = 34
Y = 94
kg ~0,52

Bestellbeispiel / Ordering example: PCL4834N

Montagehilfe und Ersatzteile für Linearbacken
Assembling tool for linear jaws and spare parts



BL-SET

- 1 2x TN100823
- 2 1x TK160609
- 3 2x PCB0516
- 4 2x TN100614
- 5 1x —

kg ~0,08

p. 84, 85

Alle Linearbacken
All linear jaws

Version mit Stiften / Version with pins
ab August / as of August 2018

Montageanleitung siehe Video
Assembly instructions see video

Version mit Kugeln / Version with balls
vor August / before August 2018



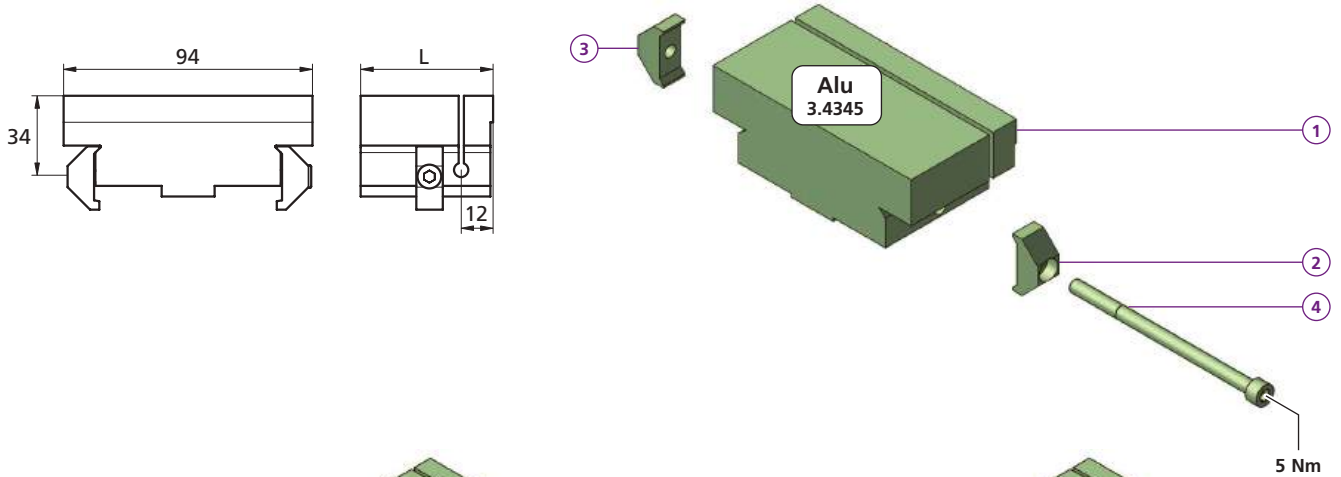
Separat bestellen / Order separately

Click-Flex

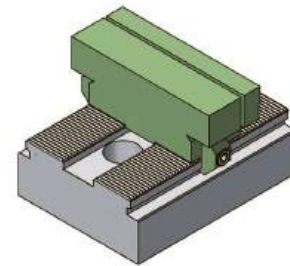
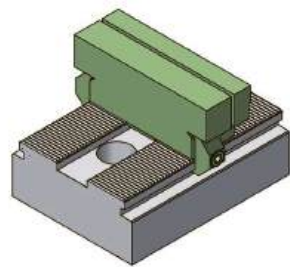
PCFX30 PCFX35

PCFX50 PCFX70

powerCLAMP

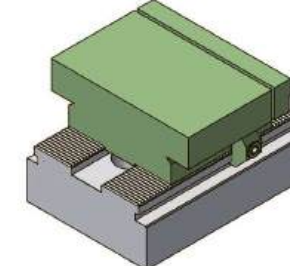
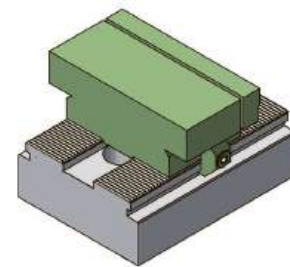


- PCFX30**
- ① 1x TF140702
 - ② 1x PCSP10B
 - ③ 1x PCSP10G
 - ④ 1x M5X85ISO4762
- L = 30
kg ~0,27



- PCFX35**
- ① 1x TF140703
- L = 35
kg ~0,31

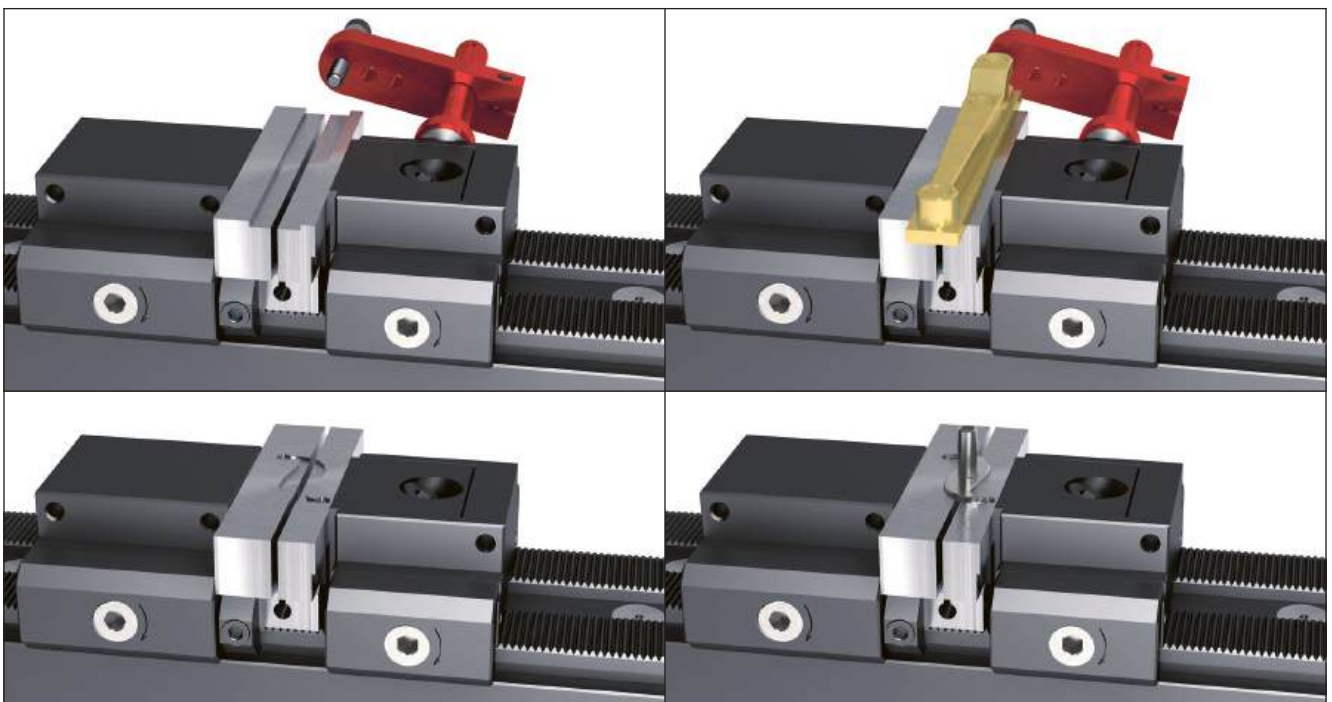
- PCFX50**
- ① 1x TF140704
 - ② 1x PCSP10B
 - ③ 1x PCSP10G
 - ④ 1x M5X85ISO4762
- L = 50
kg ~0,45

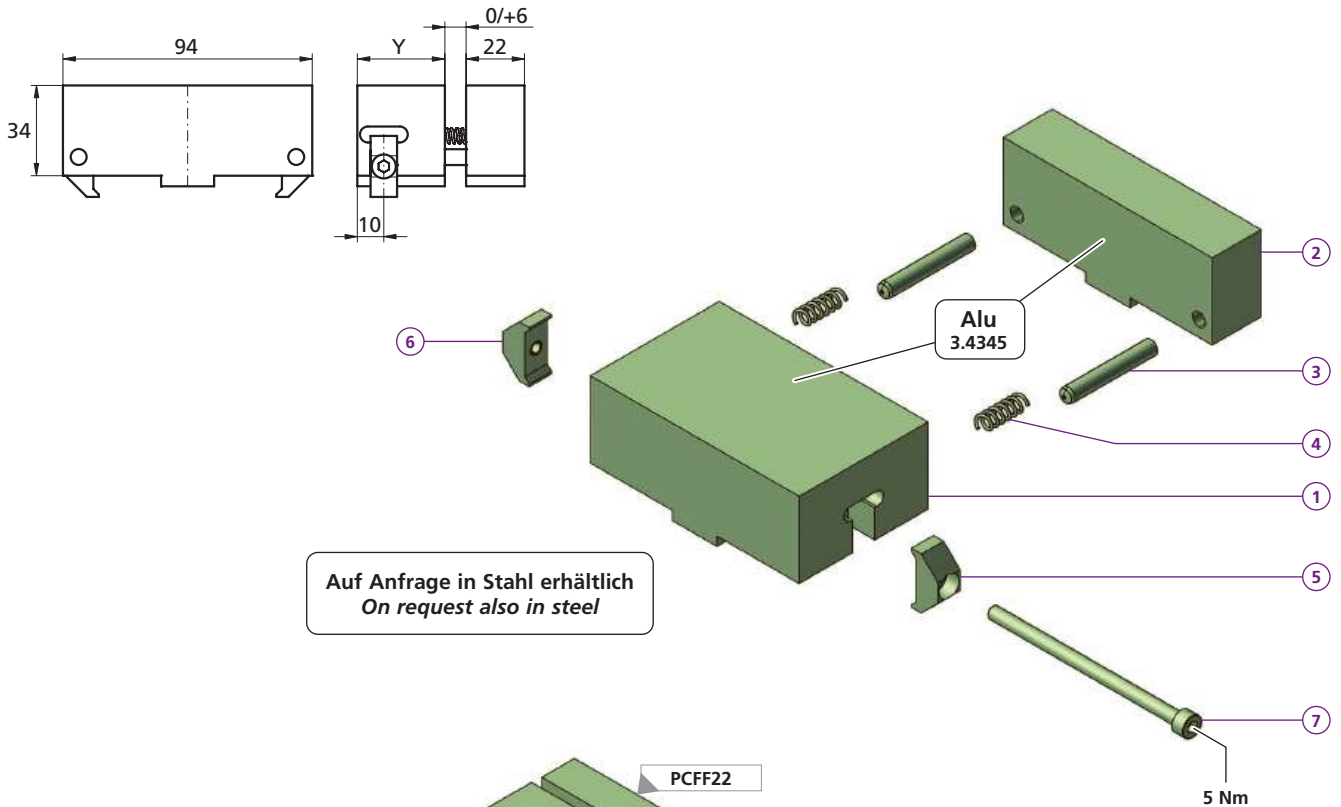


- PCFX70**
- ① 1x TF140705
- L = 70
kg ~0,62

Auf Anfrage in Stahl erhältlich
On request also in steel

Bestellbeispiel / Ordering example: **PCFX30**





Auf Anfrage in Stahl erhältlich
On request also in steel

PCFM3322

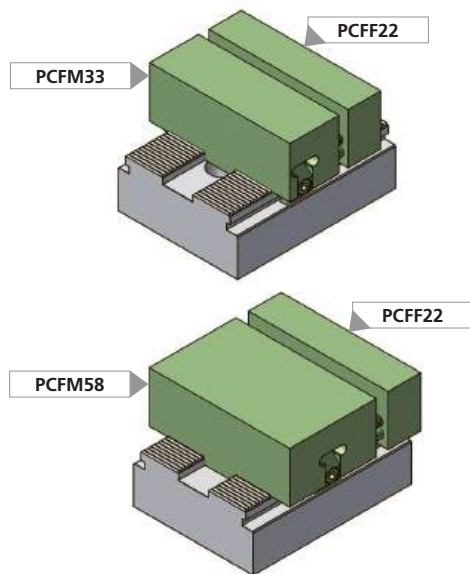
- ① 1x PCFM33
- ② 1x PCFF22
- ③ 2x CCBO0801
- ④ 2x FED0618
- ⑤ 1x PCSP10B
- ⑥ 1x PCSP10G
- ⑦ 1x M5X85ISO4762

Y = 33
kg ~0,52

PCFM5822

- ① 1x PCFM58

Y = 58
kg ~0,75



PCSP10SET kg ~0,04

- ① 1x PCSP10G
- ② 1x PCSP10B
- ③ 1x M5X85ISO4762

Bestellbeispiel / Ordering example: **PCFM3322**

Anschlagbacke flach
Jaw flat stop

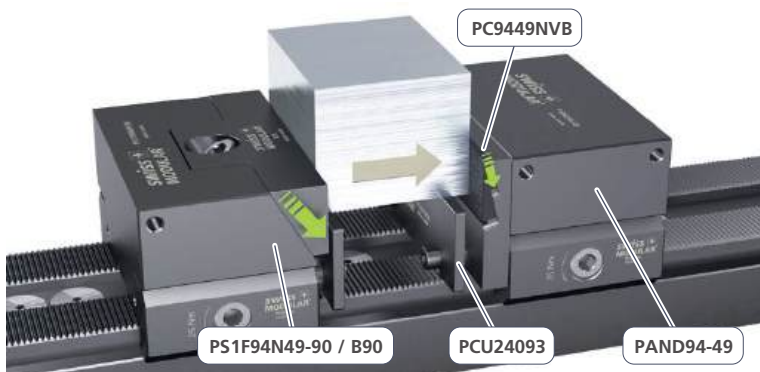
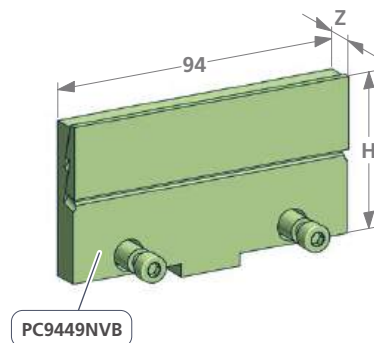
	B	H	kg
PCUD34093TG	93	34	~0,11
PCUD49093TG	93	49	~0,14

Unterlagen gehärtet und geschliffen
Parallels hardened and ground

	B	H	kg
PCUD14093	93	14	~0,05
PCUD20093	93	20	~0,06
PCUD24093	93	24	~0,08
PCUD29093	93	29	~0,09
PCUD31093	93	31	~0,10
PCUD34093	93	34	~0,11
PCUD39093	93	39	~0,12
PCUD44093	93	44	~0,14
PCUD46093	93	46	~0,14
PCUD47093	93	37	~0,15

Niederzugbacken für die Anschlagseite
Pull-down jaws for the solid reference fase

Art. Nr.	kg	H	Z
PC9434NVB	~0,24	49,8 – 49	10,21 – 10
PC9449NVB	~0,35	34,8 – 34	10,21 – 10

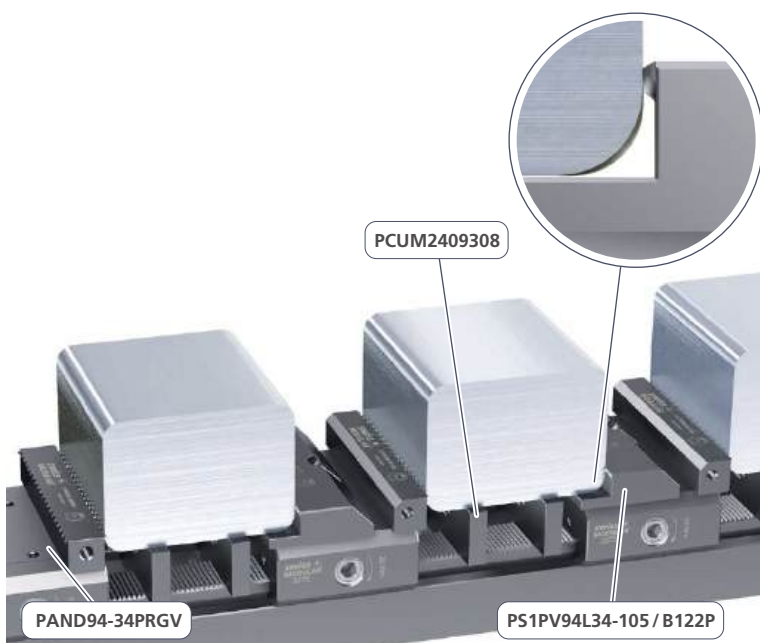
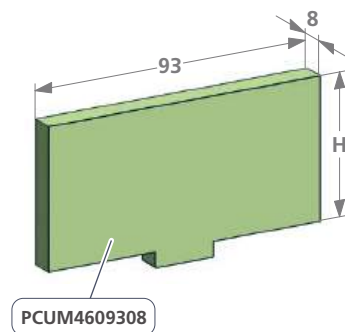


Die Niederzugbacke dient um einen zusätzlichen Niederzug-Klemmdruck auf der Anschlagseite zu erhalten.

The pull-down jaw is used to obtain an additional pull-down clamping pressure on the end module side.

Magnetische Parallelunterlagen
Magnetic steel parallels

Art. Nr.	kg	H
PCUM1409308	~0,09	14
PCUM2009308	~0,13	20
PCUM2409308	~0,15	24
PCUM2909308	~0,18	29
PCUM3109308	~0,20	31
PCUM3409308	~0,21	34
PCUM3909308	~0,24	39
PCUM4409308	~0,27	44
PCUM4609308	~0,28	46



Mit diesen magnetischen Parallelunterlagen ist die Positionierung auf der Basisschiene frei wählbar. Bei Werkstücken mit grösseren Rundungen sind die Spannbacken B122P / B123P zusammen mit den Anschlagmodulen PAND94-34PRGV / PAND94-49PRGV bestens geeignet.

With these magnetic steel parallels, the positioning on the base rail is freely selectable. For workpieces with larger curves, the clamping jaws B122P / B123P together with the end modules PAND94-34PRGV / PAND94-49PRGV are best suited.

